

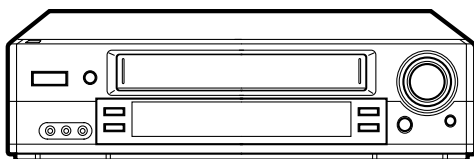
HV-FX7800 K

HV-FX5850 K

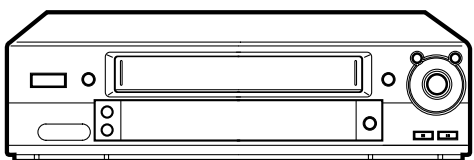
HV-GX1700 K

HV-GX1400 K

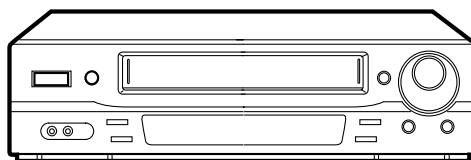
HV-GX1100 K



HV-FX7800



HV-FX5850



HV-GX1700, GX1400, GX1100

SERVICE MANUAL

STEREO VIDEO CASSETTE RECORDER <7800/5850>
VIDEO CASSETTE RECORDER <1700/1400/1100>

BASIC VIDEO MECHANISM
: D33Y1-4HF/PAL(6721RF0450A)<7800,5850>
: D33Y1-2HD/PAL(6721RF0405A)<1700,1400,1100>

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SPECIFICATIONS

<HV-FX7800, FX5850>

Video recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 heads
Tuner system	Frequency synthesized tuner
TV system	I
Video signal system	PAL color signal, 625 lines, 50 fields
Usable cassettes	VHS video cassettes
Recording/playback time	PAL SP: 5 hours max. with E-300 tape. LP: 10 hours max. with E-300 tape NTSC (Playback only) SP: 3 hours 30 minutes max. with T-210 tape LP: 7 hours max. with T-210 tape EP: 10 hours 30 minutes max. with T-210 tape
Tape speed	PAL SP: 23.39 mm/s LP: 11.69 mm/s NTSC (Playback only) SP: 33.35 mm/s LP: 16.67 mm/s EP: 11.12 mm/s
Rewind time:	Approx. 3 min. with E-180 tape
Channel coverage	UHF: 21 to 69
RF output	UHF channel between 22 and 68, 70 dBμ
Video input	0.5 - 2.0 Vp-p, 75 ohm, unbalanced
Video output	1.0 Vp-p, 75 ohm, unbalanced
Horizontal resolution	240 lines (SP)
Video S/N	43 dB (SP)
Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track)
Audio input	SCART: -6 dBm, more than 10 k ohm RCA: -6 dBμ, more than 47 k ohm <FX7800>
Audio output	SCART: -6 dBm, less than 1 k ohm RCA: -6 dBμ, less than 1 k ohm
Hi-Fi frequency response	20 Hz - 20 kHz
Hi-Fi dynamic range	More than 87 dB (SP)
Hi-Fi Wow & Flutter	Less than 0.01%(SP)
Operating temperature:	5 °C to 35 °C
Power requirements	220 ~ 240 V AC, 50 Hz
Power consumption	16 watts TYP 2.1 watts (power save mode)
Dimensions	360 (W) x 270 (D) x 94.5 (H) mm (14 ¹ / ₄ x 10 ³ / ₄ x 3 ³ / ₄ in.)
Weight	Approx. 3.2 kg (7.04 lbs.)

<HV-GX1700, GX1400, GX1100>

Video recording system	Rotary 2 head helical scanning system
Video head	2 heads
Tuner system	Frequency synthesized tuner
TV system	I
Video signal system	PAL color signal, 625 lines, 50 fields
Usable cassettes	VHS video cassettes
Recording/playback time	PAL SP: 5 hours max. with E-300 tape. LP: 10 hours max. with E-300 tape NTSC (Playback only) SP: 3 hours 30 minutes max. with T-210 tape LP: 7 hours max. with T-210 tape EP: 10 hours 30 minutes max. with T-210 tape
Tape speed	PAL SP: 23.39 mm/s LP: 11.69 mm/s NTSC (Playback only) SP: 33.35 mm/s LP: 16.67 mm/s EP: 11.12 mm/s
Rewind time:	Approx. 3 min. with E-180 tape
Channel coverage	UHF: 21 to 69
RF output	UHF channel between 22 and 68, 70 dBμ
Video input	0.5 - 2.0 Vp-p, 75 ohm, unbalanced
Video output	1.0 Vp-p, 75 ohm, unbalanced
Horizontal resolution	240 lines (SP)
Video S/N	43 dB (SP)
Audio track	1 track (Normal sound)
Audio input	SCART: -6 dBm, more than 10 k ohm RCA: -6 dBμ, more than 47 k ohm <GX1700,GX1400>
Audio output	SCART: -6 dBm, more than 47 k ohm
Operating temperature:	5 °C to 35 °C
Power requirements	220 ~ 230 V AC, 50 Hz
Power consumption	13 watts TYP 3.0 watts (power save mode)
Dimensions	360 (W) x 270 (D) x 94.5 (H) mm (14 ¹ / ₄ x 10 ³ / ₄ x 3 ³ / ₄ in.)
Weight	Approx. 3.2 kg (7.04 lbs.)

• Design and specifications are subject to change without notice.

ACCESSORIES LIST -1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S8-35R-P00-66V		INSTRUCTION ASSY CFA929MI<78>
1	S8-35R-P00-66G		INSTRUCTION ASSY CFA911MI<58>
1	S8-35R-P00-66K		INSTRUCTION ASSY CCA200TI<11>
1	S8-35R-P00-66D		INSTRUCTION ASSY CCA204TI<14>
1	S8-35R-P00-66E		INSTRUCTION ASSY CCA209TI<17>
2	S7-11R-KP0-33A		REMOTE CONTROLLER ASSY,CFA929M<78>
2	S7-11R-1P0-33A		REMOTE CONTROLLER ASSY,FOR NOR<78>
2	S7-11R-KP0-33C		REMOTE CONTROLLER ASSY,CFA911M<58>
2	S7-11R-KP0-33H		REMOTE CONTROLLER ASSY,CCA200T<11>
2	S7-11R-KP0-33B		REMOTE CONTROLLER ASSY,CCA209T<14,17>
3	S8-50R-CAA-260		CABLE,COAXIAL 1200M/M
4	S8-51R-P00-03F		CABLE ASSY,RF/SCART/RCA USI<78,58>
4	S8-51R-P00-03A		CABLE ASSY,RF/SCART/RCA USI<11,14,17>
5	S6-11R-2G0-01A		PLUG ASSY 2WAY RED/WHITE<78,58>

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	K
<58>	HV-FX5850	K
<17>	HV-GX1700	K
<14>	HV-GX1400	K
<11>	HV-GX1100	K

DISASSEMBLY INSTRUCTIONS -1/1

1. Top Case Removal

- 1) Remove 4 screws holding the top case.

2. Panel Front Removal (see Fig. 1)

- 1) Release 7 tabs, and then remove the panel front.

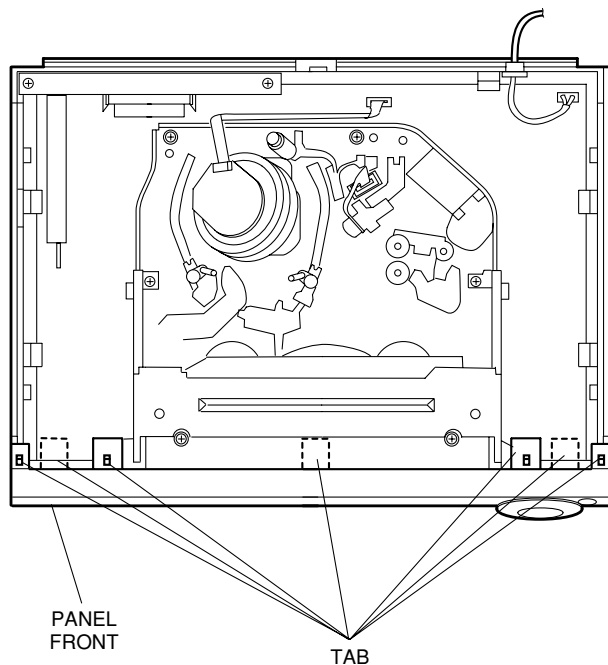


Fig. 1

3. Key1 C.B. and Key2 C.B. Removal (see Fig. 2)

- 1) Release 2 tabs, and then remove Key1 C.B. from the connector (PKM02) in the direction of arrow ①.
- 2) Release the tab, and then remove Key2 C.B. from the connector (PKM01) in the direction of arrow ②.

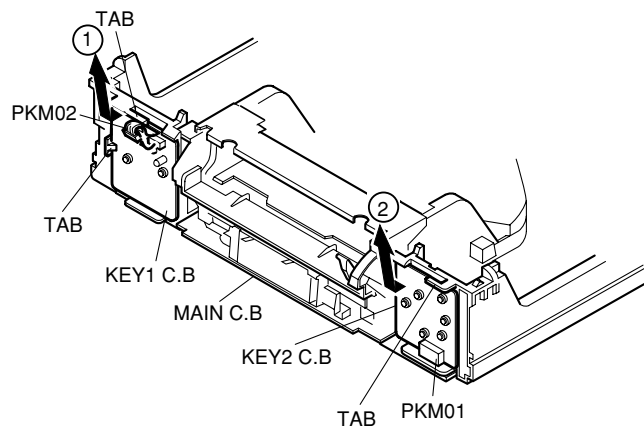


Fig. 2

4. Mechanism Removal (see Fig. 3)

- 1) Disconnect the drum FF cable from the connector (PMD01) on the Main C.B.
- 2) Disconnect the ACE head FF cable from the connector (P3D02) on the Main C.B.
- 3) Remove 6 screws ①.

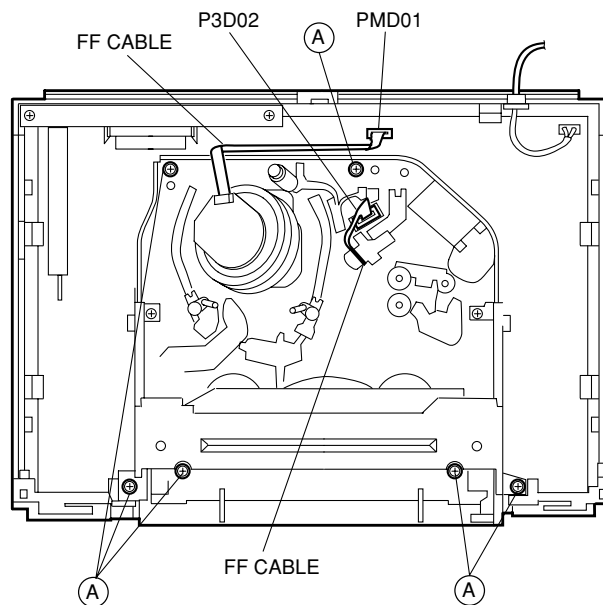


Fig. 3

5. Main C.B. Removal (see Fig. 4)

- 1) Remove 2 screws ② holding the panel assy, distributor.
- 2) Release 5 tabs, and then simultaneously lift the panel assembly, distributor and Main C.B. to remove them.

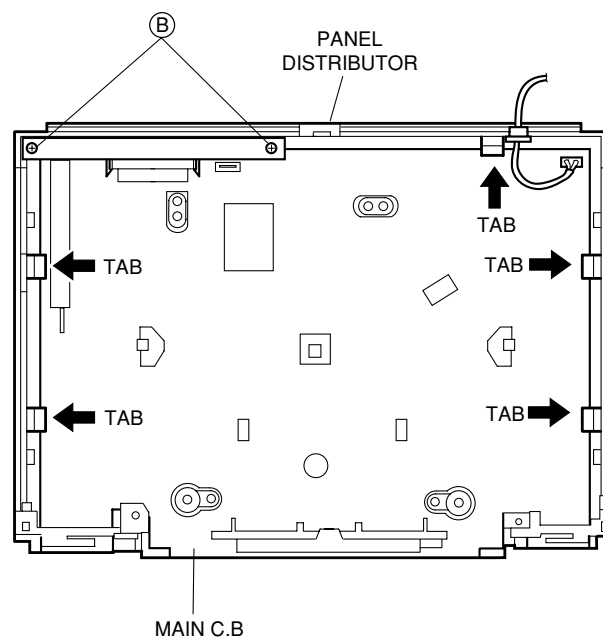
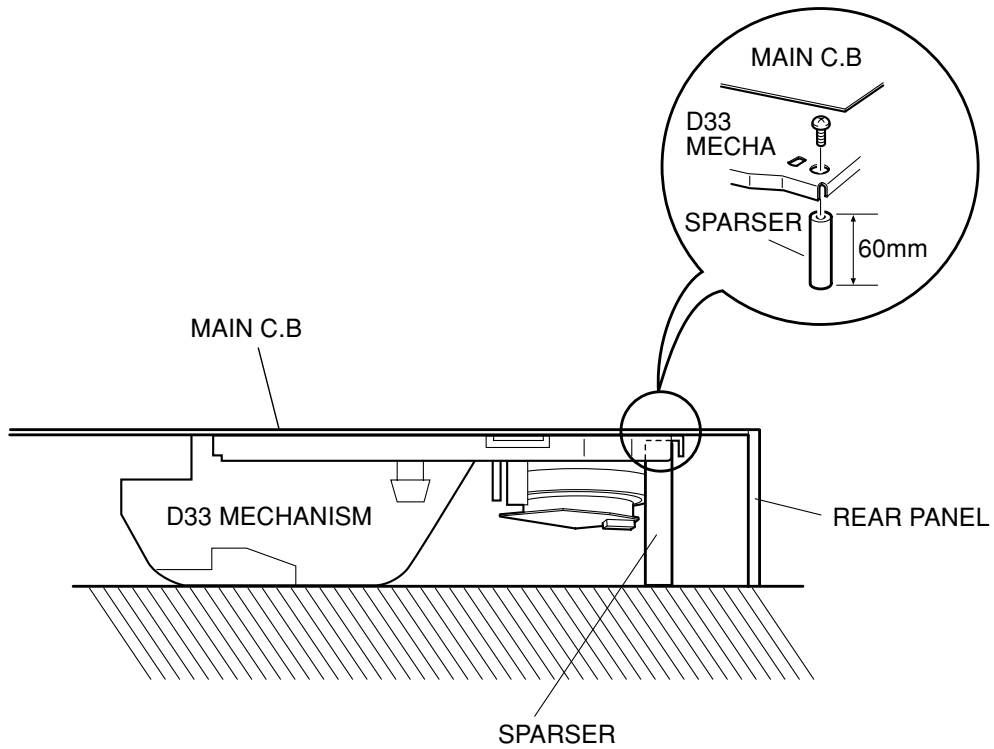


Fig. 4

SERVICE POSITION -1/1

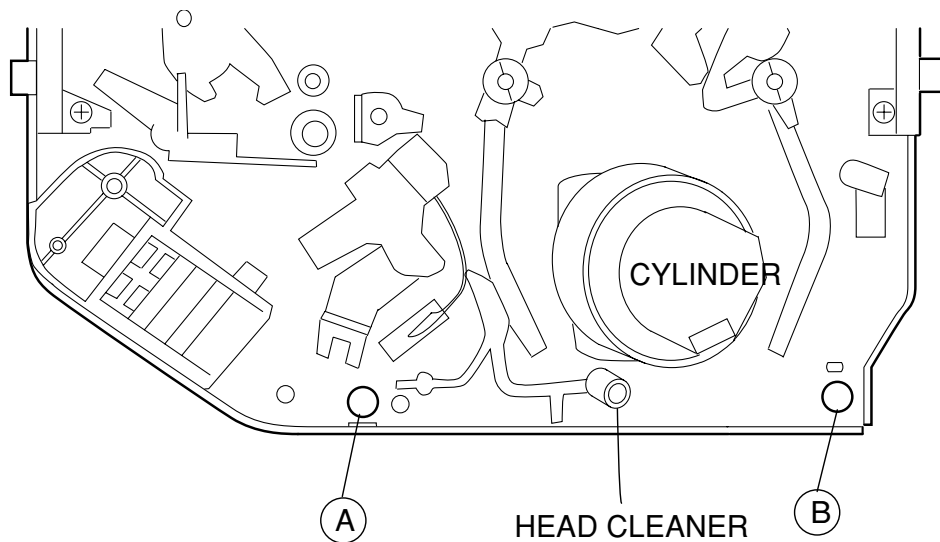
To set the mechanism to the service position in active status:

Insert a spacer as shown below: The service position can be set in the stable status without any defective contact.



Location

Install spacers at locations (A) and (B).



Top View

VCR TEST TAPE INTERCHANGEABILITY TABLE

There are two types of the new alignment tape CH-1B (for NTSC) and CH-2 (for PAL). On each tape four signals (1)-(4) are recorded for the times and in the order shown below.

(1) : 8min. → (2) : 2min. → (3) : 5min. → (4) : 5min.

The TTV-MP1 (for M-PAL), TTV-MS1 (for MESECAM) and TTV-S1 (for SECAM) alignment tapes have the same contents as the previous tapes.

Method	Now in use TYPE		New TYPE		Application
	Model	Contents *1	Model	Contents *1	
NTSC	TTV-N1	NTSC, Color bar, 1 kHz, SP	CH-1B(2)	NTSC, Stairsteps, 1 kHz, SP	PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-NS1	NTSC, Color bar, 1 kHz, SP	No Changed.		For S-VHS (SQPB) check
	TTV-N1E	NTSC, Color bar, 1 kHz, EP	CH-1B(4) *2	NTSC, Color bar, 1 kHz, EP	Switching position ADJ.
	TTV-NS6E	NTSC, Color bar, No sound, EP	No Changed.		For S-VHS (SQPB) check
	TTV-N2	NTSC, Stairsteps, 7 kHz, SP	CH-1B(1)	NTSC, Stairsteps, 7 kHz, SP	Head ACE Azimuth ADJ.
	TTV-N12 (SCV-1998)	NTSC, Color bar, 1 kHz, SP	CH-1B(4)	NTSC, Color bar, 1 kHz, EP	FM Envelope ADJ. X-Value ADJ.
	TTV-N6 (TTV-N06T)	NTSC, Mono scope, 7 kHz, SP	No Changed.		For total picture quality check (resolution, etc)
	TTV-N7A	NTSC, Stairsteps, 1 kHz, SP, HiFi 400 Hz	CH-1B(3)	NTSC, Color bar, No sound SP, HiFi 400 Hz	HiFi Audio PB Level ADJ.
PAL	TTV-P1	PAL, Color bar, 1 kHz, SP	CH-2 (2) * 3	PAL, Stairsteps, 1 kHz, SP	Switching position ADJ. PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-P1L	PAL, Color bar, 1 kHz, LP	CH-2 (4)	PAL, Color bar, 1 kHz, LP	Switching position. (LP Model) FM Envelope ADJ. (LP Model) X-Value ADJ. (LP Model)
	TTV-P2	PAL, Stairsteps, 6 kHz, SP	CH-2 (1)	PAL, Stairsteps, 6 kHz, SP	HEAD ACE Azimuth ADJ. FM Envelope ADJ. (SP Model) X-Value ADJ. (SP Model)
	TTV-P6 (TTV-N06T)	PAL, Monoscope, 6 kHz, SP	No Changed.		For total picture quality check (resolution, etc)
	TTV-P7	PAL, Stairsteps, 1 kHz, SP, HiFi 1 kHz	CH-2 (3)	PAL, Color bar, No sound SP, HiFi400 Hz	HiFi Audio PB Level ADJ.
	TTV-P16	PAL, Color bar, 400 Hz, SP, HiFi 1 kHz	No Changed.		FM Filter ADJ.

* 1. Described in the order of color format. video signal. linear audio. tape speed and Hi-Fi audio.

* 2. Use CH-1B (1)-(3) with models used exclusively in the SP mode.

* 3. Use CH-2 (3) and (4) when it is necessary to observe the chroma signal.

ELECTRICAL MAIN PARTS LIST -1/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C326	87-015-681-080	CAP,E	10-16V
	SI-CS2-416-00B	IC,CAT24W16P		C327	87-015-681-080	CAP,E	10-16V
	SI-FA8-082-00A	IC,FAN8082 8P		C333	87-015-681-080	CAP,E	10-16V
	SI-MCR-H10-08A	IC,HD6432197A37FX		C337	87-015-698-080	CAP,E	4.7-50V
	SI-KE4-310-00A	IC,KIA431 3P		C339	87-015-698-080	CAP,E	4.7-50V
	SI-KE7-031-00A	IC,KIA7031P		C346	87-015-684-080	CAP,E	47-16V
	87-001-196-010	IC,KIA7042P		C348	87-015-695-080	CAP,E	1.0-50V
	SI-SA7-159-80B	IC,LA71598HM		C354	87-015-684-080	CAP,E	47-16V
	SI-SA7-479-30A	IC,LC74793<78,17>		C358	87-015-695-080	CAP,E	1.0-50V
	SI-MT1-443-00A	IC,MM1443XJ<14,17>		C374	87-015-684-080	CAP,E	47-16V
	SI-IT3-417-00B	IC,MSP3417D-QG<78,58>		C376	87-015-681-080	CAP,E	10-16V
	SI-JR2-233-00A	IC,NJM2233S<78>		C377	87-015-681-080	CAP,E	10-16V
▲	SI-PMG-SK0-01A	IC,STR-G6351L		C379	87-010-403-040	CAP,E	3.3-50V
	SI-PH9-605-00A	IC,TDA9605H<78,58>		C386	87-010-552-040	CAP,E	22-16V
	SI-NE1-631-10A	IC,UPD16311GC-AB6<78,58>		C389	87-015-698-080	CAP,E	4.7-50V
▲	S5-00R-DB0-11A	SENSOR,PHOTO KP1010		C390	87-010-552-040	CAP,E	22-16V
TRANSISTOR				C392	87-010-408-040	CAP,E	47UF-50V
	ST-R19-800-9CA	TR,2SA1980G		C500	87-016-040-080	CAP,0	0.047F-5.5V<58,11,14>
	ST-R53-430-9BA	TR,2SC5343-L		C502	87-015-684-080	CAP,E	47-16V
	ST-R53-440-9AA	TR,2SC5344Y		C503	87-016-088-040	CAP,E	220-6.3V
	ST-R10-030-9AA	TR,KSR1003		C504	87-016-088-040	CAP,E	220-6.3V
	ST-R12-680-9BA	TR,KTA1268-BL		C505	87-015-684-080	CAP,E	47-16V
	ST-R12-730-9AA	TR,KTA1273-TP-Y		C510	87-016-088-040	CAP,E	220-6.3V
	S7-A30-293-010	TR,KTC2804-Y		C523	87-010-402-040	CAP,E	2.2-50V
	ST-R32-050-9AB	TR,KTC3205-TP-Y<78,58>		C524	87-015-684-080	CAP,E	47-16V
	ST-R22-030-9AF	TR,SRA2203		C525	87-016-088-040	CAP,E	220-6.3V
	ST-R12-010-9AC	TR,SRC1201 4.7K,		C526	87-016-130-080	CAP,47	25V
	ST-R12-030-9AE	TR,SRC1203		C530	87-015-681-080	CAP,E	10-16V
DIODE				C531	87-016-573-080	CAP,E	1000UF-6.3V
	SD-R15-822-0AA	DIODE,1N5822		C534	87-015-698-080	CAP,E	4.7-50V
	87-020-465-080	DIODE,1SS133		C535	87-015-698-080	CAP,E	4.7-50V
	SD-R18-020-9AA	DIODE,ERA18-02KFRB		C546	87-016-130-080	CAP,47	25V
	87-357-529-310	DIODE,ERA22-10		C561	87-016-088-040	CAP,E	220-6.3V
	SD-R20-200-0AB	DIODE,HER202 BK		C5A5	87-015-695-080	CAP,E	1.0-50V
	SD-R10-400-9AB	DIODE,RL104		C5F2	87-010-408-040	CAP,E	47UF-50V<78,58>
	SD-R10-400-9BA	DIODE,RL104F		C5F3	SC-E22-73D-638	CAP,E	220-10V<78,58>
	87-070-173-010	DIODE,S1WBA60		C5F7	87-015-681-080	CAP,E	10-16V
MAIN C.B				C561	87-016-573-080	CAP,E	1000UF-6.3V<11,14,17>
▲C101	S6-240-88F-000	CAP,PCX2 275V 0.1UF,M		C5P9	87-015-698-080	CAP,E	4.7-50V<78,58>
▲C102	S6-240-88F-000	CAP,PCX2 275V 0.1UF,M		C700	87-016-455-080	CAP,E	470UF-6.3V<78,58>
▲C103	SC-E47-6CU-611	CAP,E 47UF-400V		C701	87-015-698-080	CAP,E	4.7-50V
▲C105	87-016-375-010	CAP,0.01UF-630V		C703	87-015-681-080	CAP,E	10-16V
▲C106	S6-240-87A-000	HIGH VOL 150P-1KV		C704	87-015-684-080	CAP,E	47-16V
C109	87-010-415-010	CAP,10M-50V		C706	87-016-455-080	CAP,E	470UF-6.3V
▲C112	87-012-379-010	CAP,3300PF-400V		C713	87-015-684-080	CAP,E	47-16V
▲C113	SA-1B3-0KH-2M0	CAP,220PF-400V		C7M2	87-015-681-080	CAP,E	10-16V
C116	SC-E10-86F-6CM	CAP,E 1000UF-16V M FM5 BU		C7V1	87-015-684-080	CAP,E	47-16V<78,17>
C117	87-010-375-080	CAP,E 330-10V		C7V6	87-015-698-080	CAP,E	4.7-50V<78,17>
C118	SC-E22-73D-638	CAP,E 220-10V<78,58>		C7V7	87-015-695-080	CAP,E	1.0-50V<78,17>
C120	87-016-134-080	CAP,E 470UF-25V M FM		C7V8	87-015-695-080	CAP,E	1.0-50V<78,17>
C121	87-016-585-080	CAP,E 330UF-25V		C806	87-015-698-080	CAP,E	4.7-50V<78,58>
C151	87-015-681-080	CAP,E 10-16V		C807	87-015-698-080	CAP,E	4.7-50V<78,58>
C153	87-015-684-080	CAP,E 47-16V		C810	87-015-681-080	CAP,E	10-16V<78,58>
C301	87-015-695-080	CAP,E 1.0-50V<11,14,17>		C811	87-015-681-080	CAP,E	10-16V<78,58>
C303	87-015-695-080	CAP,E 1.0-50V		C813	87-015-681-080	CAP,E	10-16V<78,58>
C304	87-015-684-080	CAP,E 47-16V		C814	87-015-681-080	CAP,E	10-16V<78,58>
C310	87-015-698-080	CAP,E 4.7-50V		C815	87-015-681-080	CAP,E	10-16V<78,58>
C315	87-015-681-080	CAP,E 10-16V		C816	87-015-681-080	CAP,E	10-16V<78,58>
C316	87-015-681-080	CAP,E 10-16V		C817	87-015-681-080	CAP,E	10-16V<78,58>
C318	87-015-695-080	CAP,E 1.0-50V		C818	87-015-698-080	CAP,E	4.7-50V<78,58>
C320	87-015-695-080	CAP,E 1.0-50V		C819	87-015-681-080	CAP,E	10-16V<78,58>
C322	87-015-684-080	CAP,E 47-16V		C821	87-015-684-080	CAP,E	47-16V<78,58>
C325	87-015-695-080	CAP,E 1.0-50V		C822	87-015-681-080	CAP,E	10-16V<78,58>
				C823	87-015-681-080	CAP,E	10-16V<78,58>
				C824	87-015-681-080	CAP,E	10-16V<78,58>
				C825	87-015-684-080	CAP,E	47-16V<78,58>
				C827	87-015-681-080	CAP,E	10-16V<78,58>
				C828	87-015-684-080	CAP,E	47-16V<78,58>
				C832	87-015-684-080	CAP,E	47-16V<78,58>
				C835	87-010-400-080	CAP,E	0.47-50V<78,58>

ELECTRICAL MAIN PARTS LIST -2/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C902	87-016-577-080		CAP,E 470UF-16V	P3D01	S5-612-34W-000		GF120-10S-TS-A LGC 10P MP<78,58>
C907	87-015-695-080		CAP,E 1.0-50V<78>	P3D01	S5-612-34Z-000		CONN,3P<11,14,17>
C912	87-016-577-080		CAP,E 470UF-16V<EXCEPT 11>	P3D02	S6-30R-5S0-10A		CONN,6P
C956	87-015-695-080		CAP,E 1.0-50V	P3D03	S5-612-51B-000		GB201-2P-TS-B(LGC) P
C960	87-015-695-080		CAP,E 1.0-50V	PMC01	S6-30R-BE0-1H0		CONN,8P
C961	87-015-695-080		CAP,E 1.0-50V<EXCEPT 11>	PMD01	S5-612-34D-000		CONNECTOR (CIRC),FFC/FPC
C962	87-015-695-080		CAP,E 1.0-50V<14,17>	PMK01	S5-618-43D-000		CONN,TUC-P05P 5P
C963	87-010-552-040		CAP,E 22-16V<14,17>	PMK02	S6-724-34B-000		CONN ASSY 5P-150<58,11>
C964	87-015-695-080		CAP,E 1.0-50V<14,17>	PMK02	S6-724-34M-000		CONN ASSY 10P-150<78,14,17>
C9A1	87-015-695-080		CAP,E 1.0-50V<14,17>	PML01	S6-30R-2S0-11A		CONN,2P
C9A2	87-015-695-080		CAP,E 1.0-50V<14,17>	△PW101	S5-612-92B-000		GP390 LGC 3P STRAIG P
C9A3	87-015-695-080		CAP,E 1.0-50V<14,17>	△R101	S6-140-07A-000		RES,CEM 2.7/2W
C9A5	87-015-681-080		CAP,E 10-16V<14,17>	R104	SR-S56-02K-619		RES,56K-2W
C9A6	87-015-681-080		CAP,E 10-16V<14,17>	R109	SR-S03-50K-619		RES,0.35-2W
C9A7	87-015-681-080		CAP,E 10-16V<14,17>	R/C5F1	S7-12R-193-8GA		REMOTE CONTROLLER RECEI<11,14,17>
C9F7	87-015-695-080		CAP,E 1.0-50V<78,14,17>	R/C5F1	S7-12R-293-8GA		REMOCON RECEIVER<78,58>
CS501	S6-00R-DB0-04C		SW,MPT01025ZMLB4 MIC	RS501	S5-00R-AB0-02A		SENSOR GP1S566
DIG501	S3-02R-1N0-03A		DH 9MT168GK<78,58>	RS502	S5-00R-AB0-02A		SENSOR GP1S566
ES501	S9-31R-001-6C0		HOLDER ASSY END(DI-CKD) LOCAL	△T101	S6-420-24D-000		TRANSFORMER, SMPS
ES502	S9-31R-001-6C0		HOLDER ASSY END(DI-CKD) LOCAL	TU701	S7-00R-PL0-2C0		TUNER, TADC-U201D
△F101	S5-850-11T-000		FUSE,1600MA 250V	W101	87-005-440-080		COIL,47M 6-6-5<78,58>
△F102	87-001-196-010		ICP-N10 T104<78,58>	X301	S2-02R-244-3AC		CRYSTAL, STANDARD H49U 4.433709
△FH1	S5-860-08B-000		HOLDER,FUSE CLIP	X501	S2-02R-310-01E		X' TAL, 10.0000MHZ
△FH2	S5-860-08B-000		HOLDER,FUSE CLIP	X502	S5-290-01K-000		X' TAL, 32.768KHZ
FL301	S6-330-32K-000		COIL,OSC BIAS 1CHIP 5V	X503	S2-02R-317-71G		CRYSTAL ATS(=31771E)
J101	S6-360-04C-000		COIL,BFS3550R2FD8	ZD104	SD-Z56-260-9AA		ZENER,GDZJ5.6B 26MM TP<78,58>
JK801	S6-12R-C00-2C0		JACK,RCA RCA-208C-06<78,58>	ZD151	S9-7U0-130-1C0		ZENER,MTZ13C
JK901	S6-20R-M00-02B		SOCKET 1F-21P<11>	ZD501	SD-Z62-260-9CA		ZENER,GDZJ6.2C 26MM
JK901	S6-20R-M00-02C		SOCKET 2F-21P<EXCEPT 11>	ZD503	SD-Z62-260-9CA		ZENER,GDZJ6.2C 26MM
△L102	S6-161-45H-000		FILTER SHT LFS2020V4-04350	ZD701	87-002-743-080		ZENER,MTZ33B
L103	S6-330-88G-000		COIL,CHOCK TP 5MM	ZD801	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>
L104	S6-330-88G-000		COIL,CHOCK TP 5MM	ZD802	SD-Z56-260-9AA		ZENER,GDZJ5.6B 26MM TP<78,58>
L105	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>	ZD803	SD-Z13-000-9AA		ZENER,MTZ13A<78,58>
L301	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	ZD804	SD-Z13-000-9AA		ZENER,MTZ13A<78,58>
L302	87-003-286-080		COIL,56 2.3-3.4-5	ZD805	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>
L303	87-003-286-080		COIL,56 2.3-3.4-5<11,14,17>	ZD806	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>
L303	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>	NICAM/A2 C.B<78,58>			
L305	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	C751	87-015-684-080		CAP,E 47-16V<78,58>
L306	SL-R10-00K-0P5		INDUCTOR,RADIAL LEAD LF7.5N OE	C757	87-015-684-080		CAP,E 47-16V<78,58>
L307	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	C758	87-015-681-080		CAP,E 10-16V<78,58>
L308	87-005-440-080		COIL,47M 6-6-5	C759	87-015-681-080		CAP,E 10-16V<78,58>
L310	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	C762	SC-Q39-21N-409		CAP,0.0039U 100V<78,58>
L503	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	C763	SC-Q39-21N-409		CAP,0.0039U 100V<78,58>
L504	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	C766	87-010-403-040		CAP,E 3.3-50V<78,58>
L505	87-005-455-080		COIL,820 6-6-5	C769	87-015-681-080		CAP,E 10-16V<78,58>
L506	87-005-686-080		COIL,15UH	C770	87-015-684-080		CAP,E 47-16V<78,58>
L5F1	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>	L751	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L5G1	87-005-126-080		COIL,470M 6-6-5<11,14,17>	L752	87-005-196-080		INDUCTOR,10<78,58>
L5S1	87-003-148-080		INDUCTOR,33	L753	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L702	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	L754	87-003-129-080		INDUCTOR,6800<78,58>
L703	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH	L755	87-003-129-080		INDUCTOR,6800<78,58>
L704	87-003-145-080		INDUCTOR,8.2	P7M01	S5-618-48F-000		CABLE 2P<78,58>
L705	SL-R10-00K-0P5		INDUCTOR,RADIAL LEAD LF7.5N OE	P7M02	S5-618-48F-000		CABLE 2P<78,58>
L7V1	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,17>	X751	S5-290-219-000		X' TAL 18.432MHZ<78,58>
L801	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>	KEY-1 C.B			
L8R1	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>	BD981	S6-360-04C-000		COIL,BFS3550R2FD8<78,14,17>
L8R2	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>	JK901	S5-720-34S-000		JACK,ST 2P(YL)<78,14,17>
L901	87-003-152-080		INDUCTOR,100M 2.3-3.4-5	JK902	S5-720-34R-000		JACK,ST 2P(WHT)<78,14,17>
L902	87-003-152-080		INDUCTOR,100M 2.3-3.4-5	JK903	S5-720-34Q-000		JACK,ST 2P(RED)<78>
L904	87-003-152-080		INDUCTOR,100M 2.3-3.4-5	L901	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78>
L905	S6-360-04C-000		COIL,BFS3550R2FD8	L902	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,14,17>
L906	87-003-152-080		INDUCTOR,100M 2.3-3.4-5	LED902	SD-L53-110-0AA		LED,SG5311(GRN)
L907	S6-360-04C-000		COIL,BFS3550R2FD8	PKM02	S5-610-36D-000		MA V 8283-0512 WH ELCO<58,11>
L911	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<EXCEPT 11>	PKM02	S5-610-36I-000		CONN,8283-1012 WH ELCO<78,14,17>
L912	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<EXCEPT 11>	SW901	S5-562-82C-000		SW,SKQNGED ALPS 5MM
L914	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<EXCEPT 11>				
L916	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<EXCEPT 11>				
LD501	S9-31R-001-7C0		HOLDER ASSY LED(DI-CKD) LOCAL				
LED501	S3-01R-1U0-02B		LED ASSY LTG-9935M-1<11,14,17>				
MS501	S6-00R-PY0-01B		SW,MMS00420ZMBO MIC				

ELECTRICAL MAIN PARTS LIST -3/3

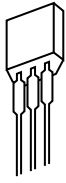
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SW902	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW903	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW904	S5-562-82C-000	SW,SKQNQED	ALPS 5MM

KEY-2 C.B

PKM01	S5-618-44D-000	CONN,5P	
SW905	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW906	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW907	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW908	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW909	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW910	S5-562-82C-000	SW,SKQNQED	ALPS 5MM
SW911	S5-562-82C-000	SW,SKQNQED	ALPS 5MM

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	K
<58>	HV-FX5850	K
<17>	HV-GX1700	K
<14>	HV-GX1400	K
<11>	HV-GX1100	K

TRANSISTOR ILLUSTRATION -1/1



E C B

KTA1267
SRA2203
SRC1203



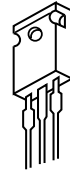
E C B

2SA1980
2SC5343
2SC5344
KSR1003
KTA1268
SRC1201



E C B

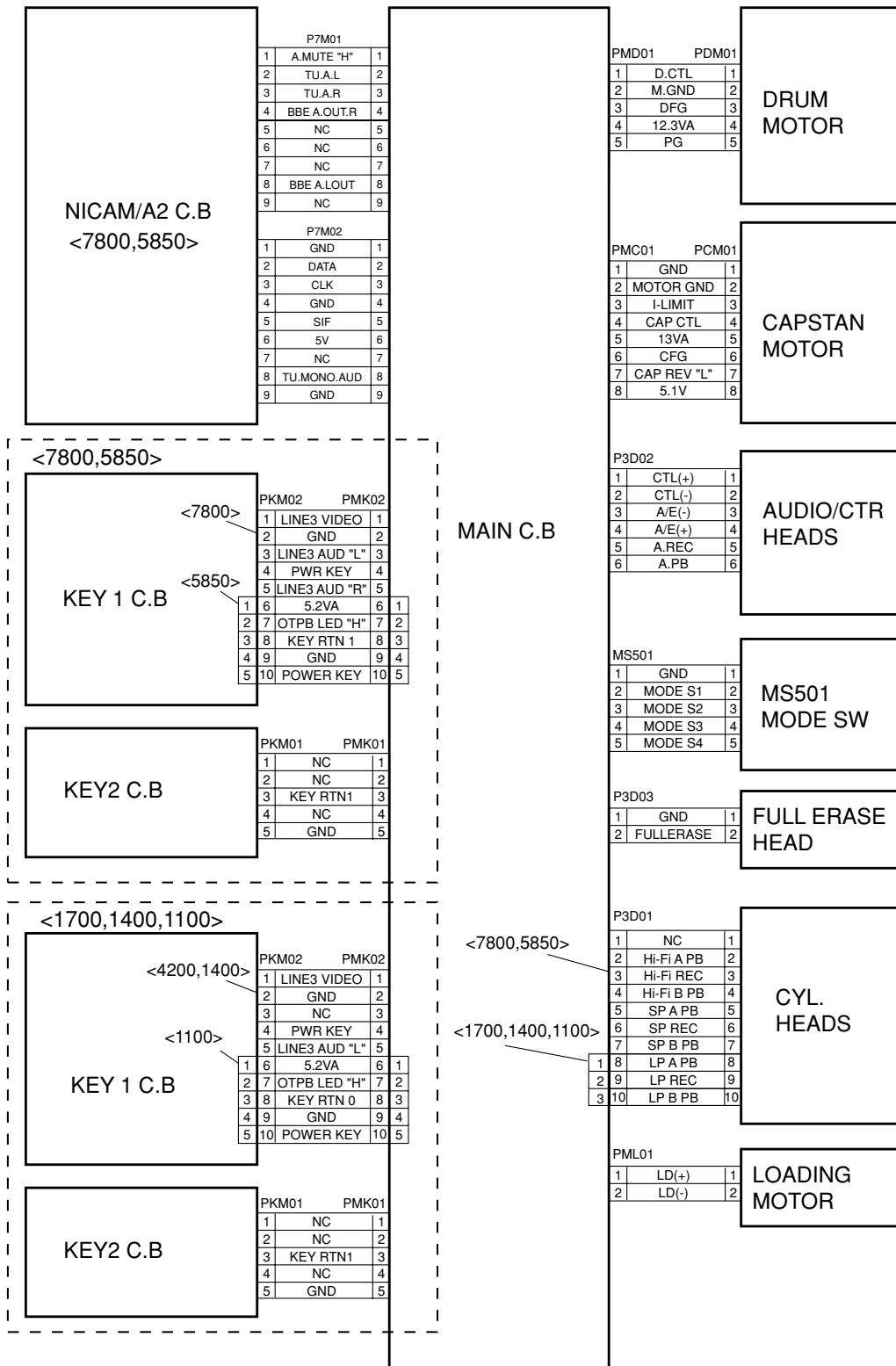
KTC3205



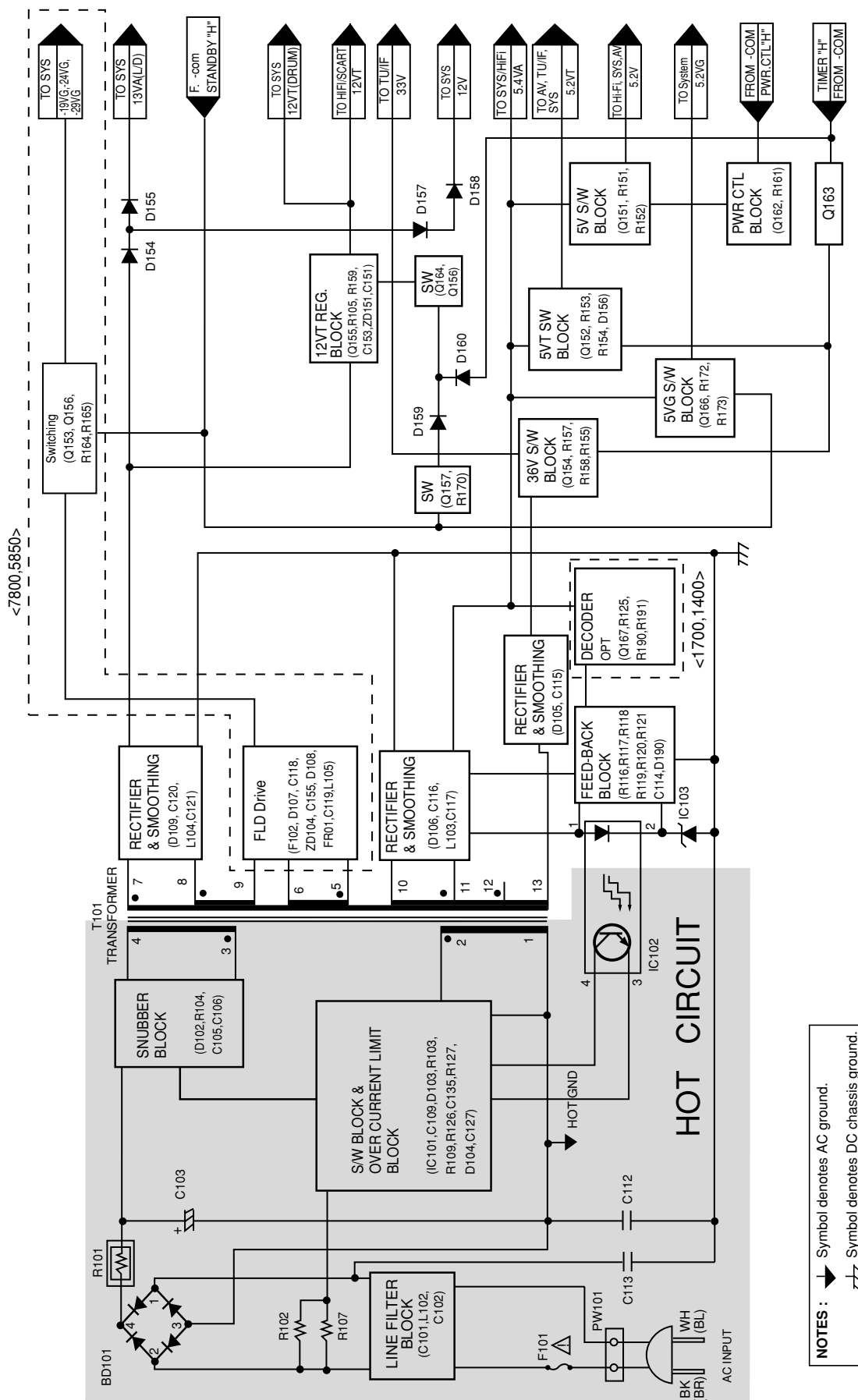
E C B

KTC2804

WIRE HARENESS DIAGRAM -1/1



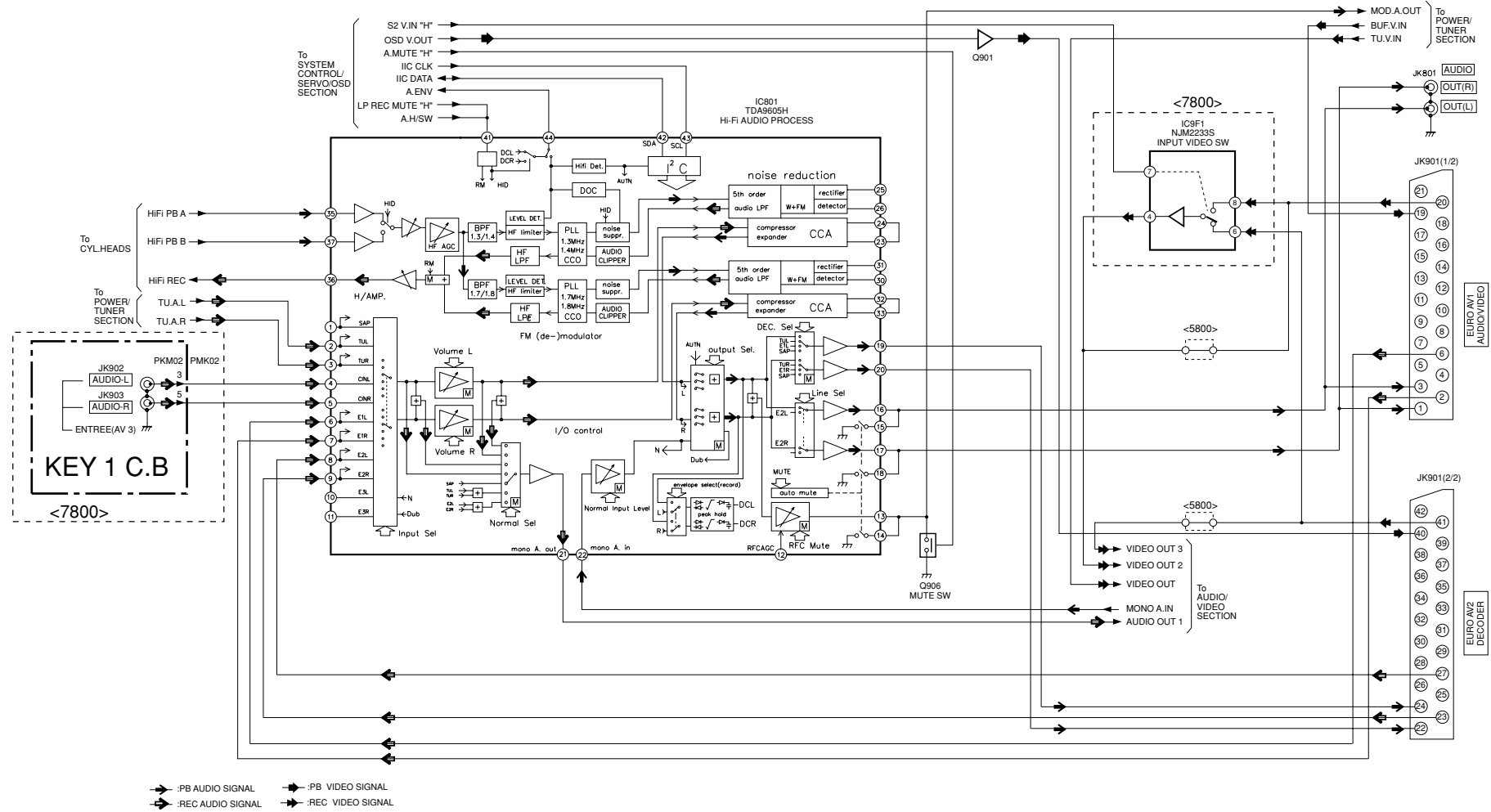
BLOCK DIAGRAM -1/8 (POWER SECTION)



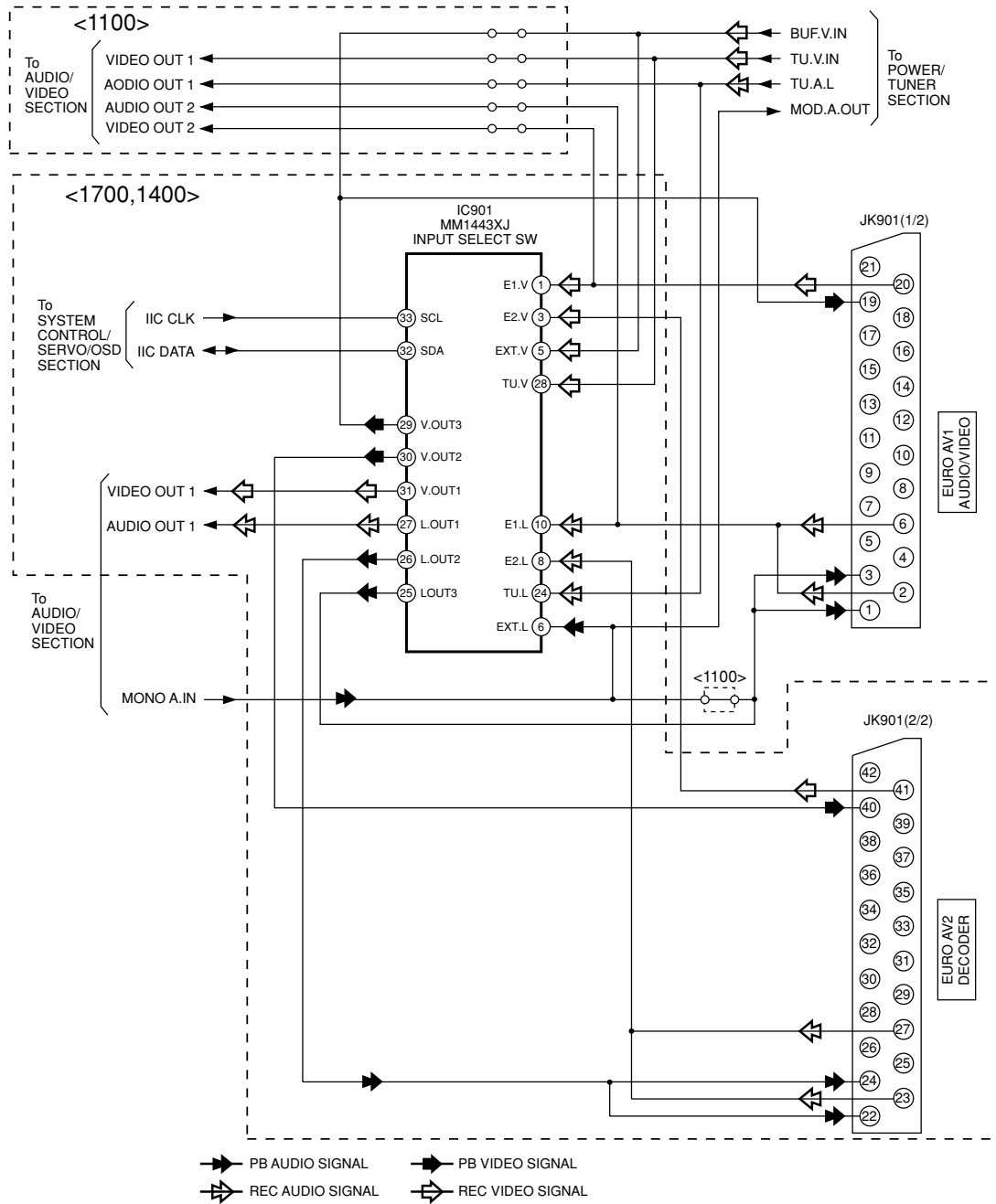
NOTES: ↓ Symbol denotes AC ground.

Symbol denotes DC chassis ground.

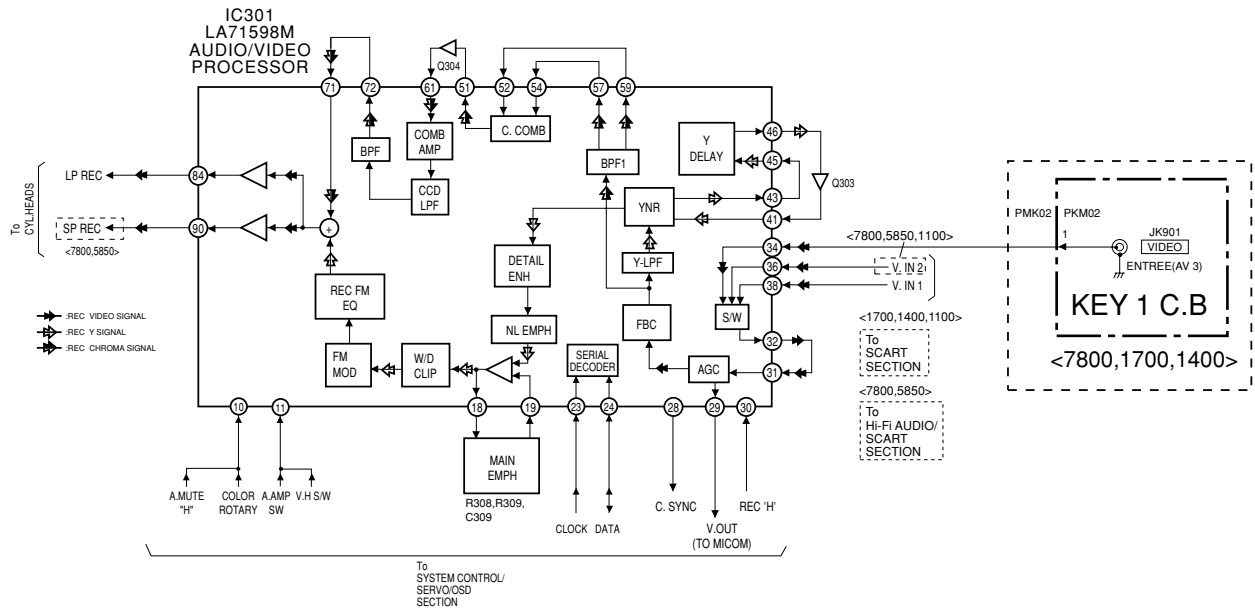
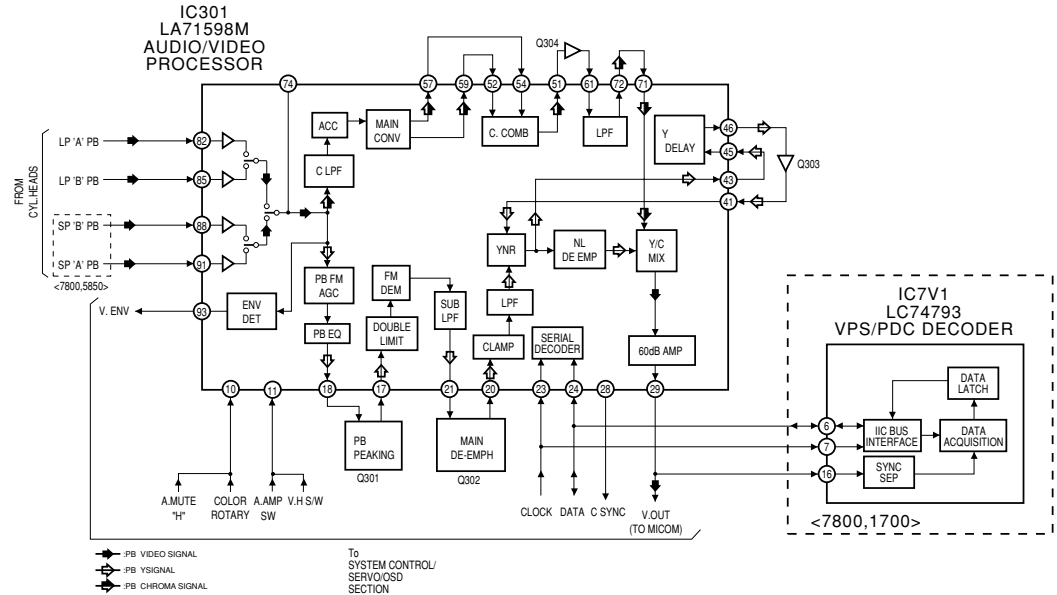
BLOCK DIAGRAM -2/8 (AUDIO/VIDEO SECTION) <HV-FX7800/FX5850>



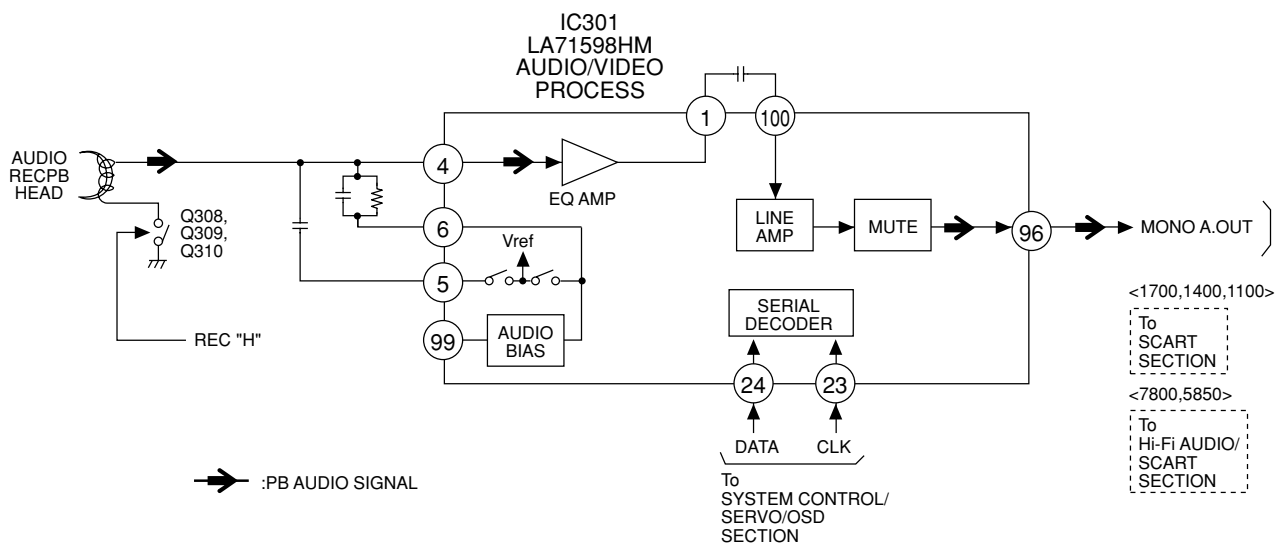
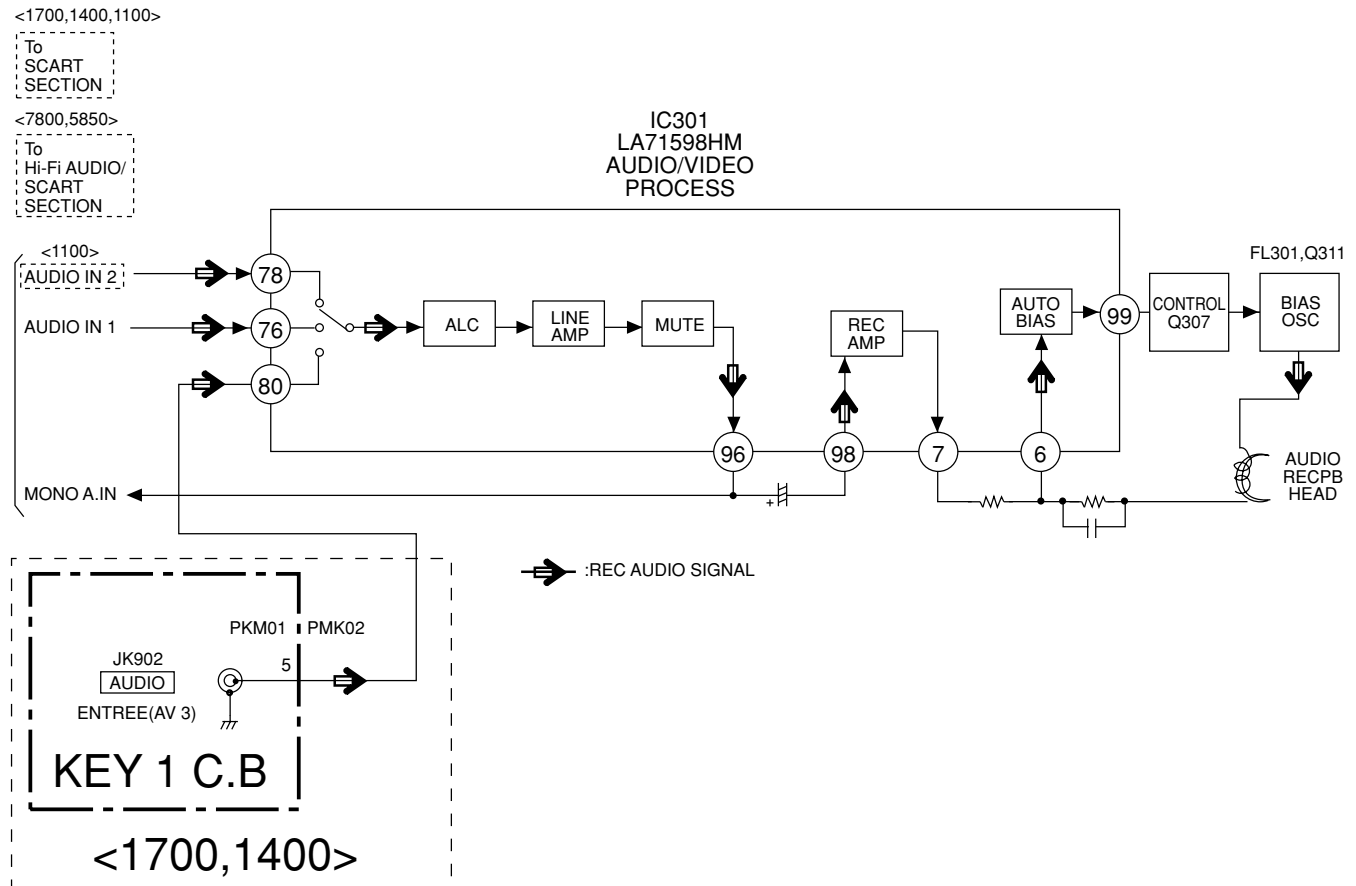
BLOCK DIAGRAM -3/8 (AUDIO/VIDEO SECTION) <HV-GX1700/GX1400/GX1100>



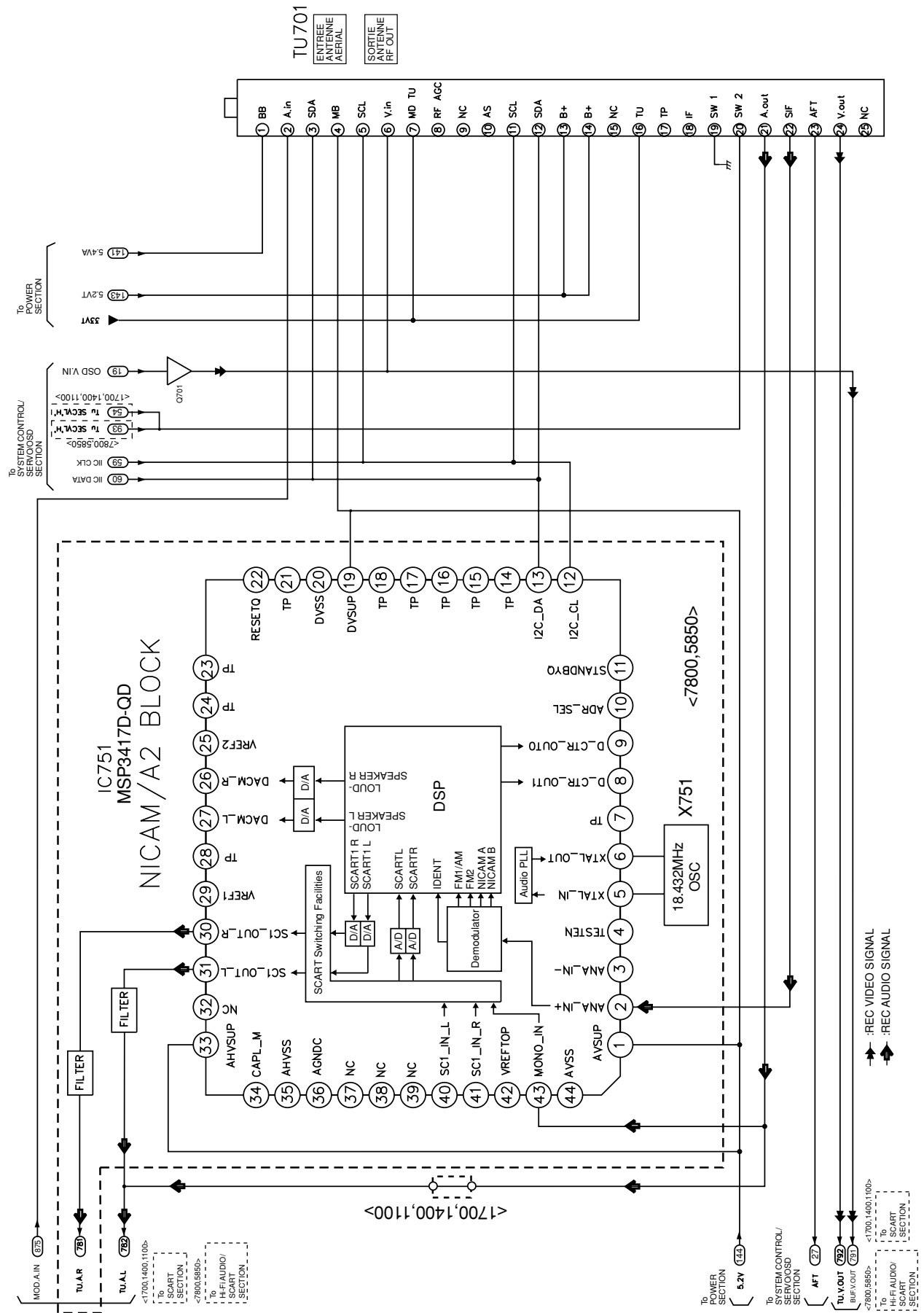
BLOCK DIAGRAM -4/8 (VIDEO SECTION)



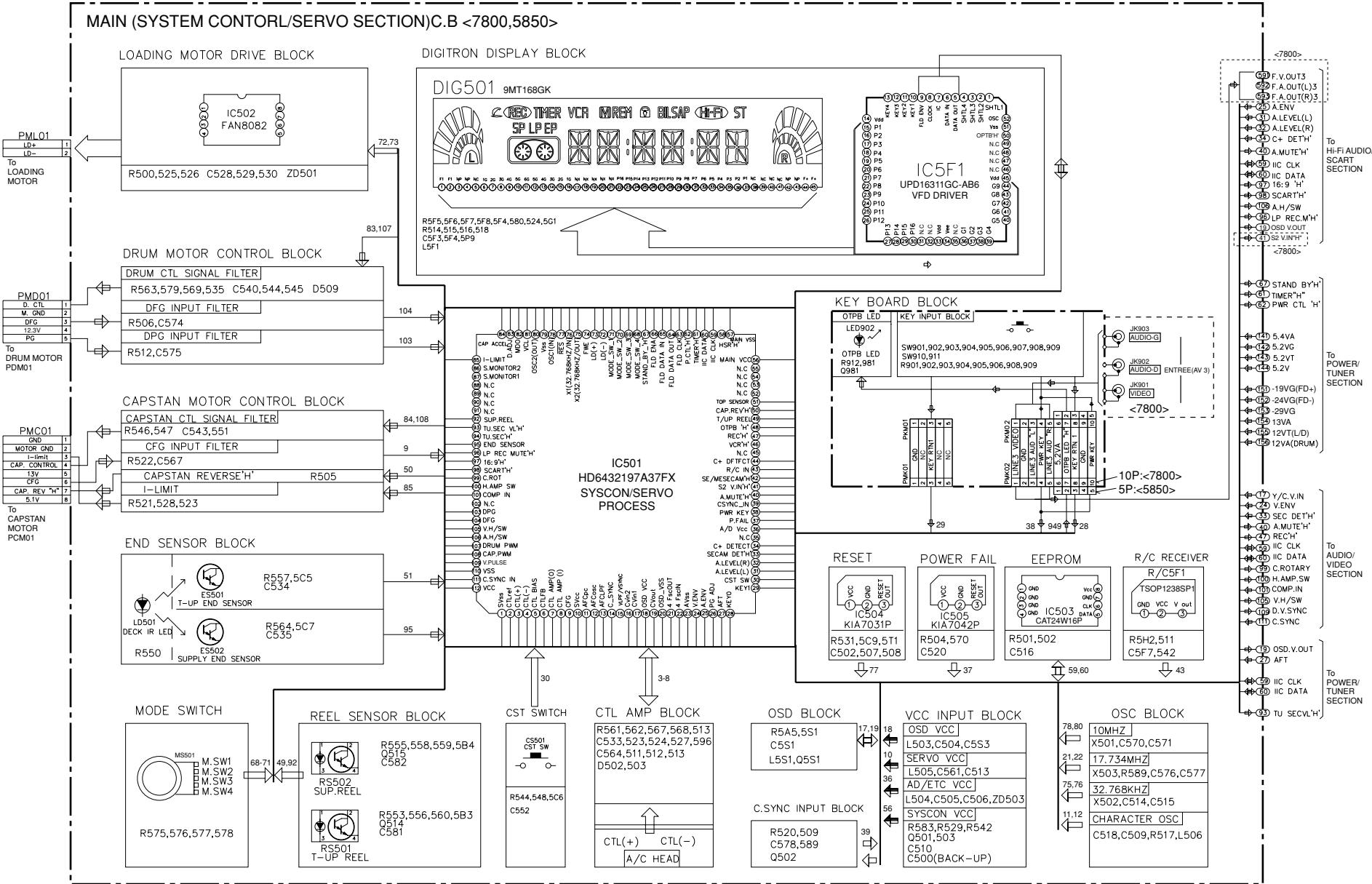
BLOCK DIAGRAM -5/8 (NORMAL AUDIO SECTION)



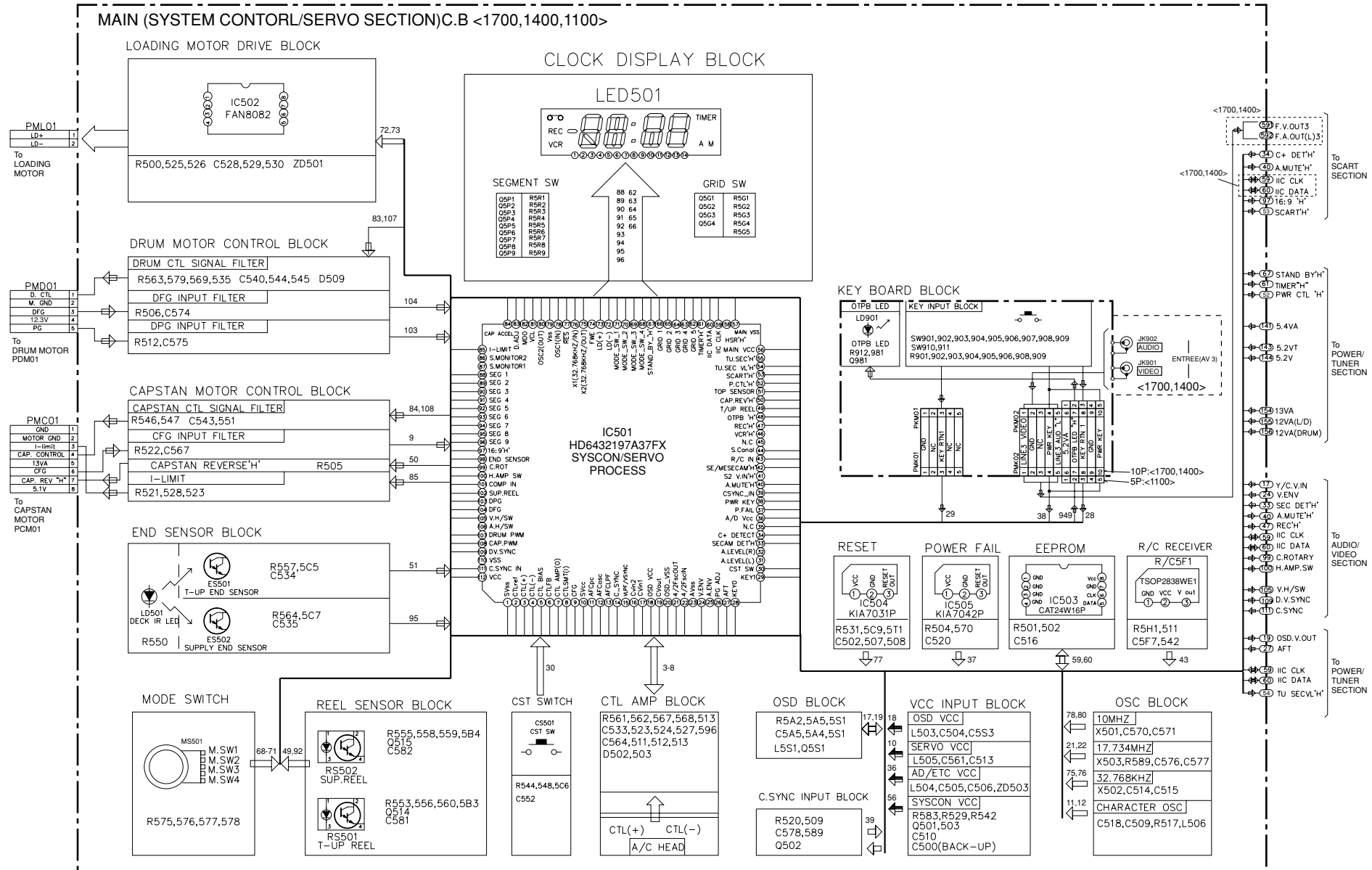
BLOCK DIAGRAM -6/8 (TUNER, NICAM/A2 SECTION)



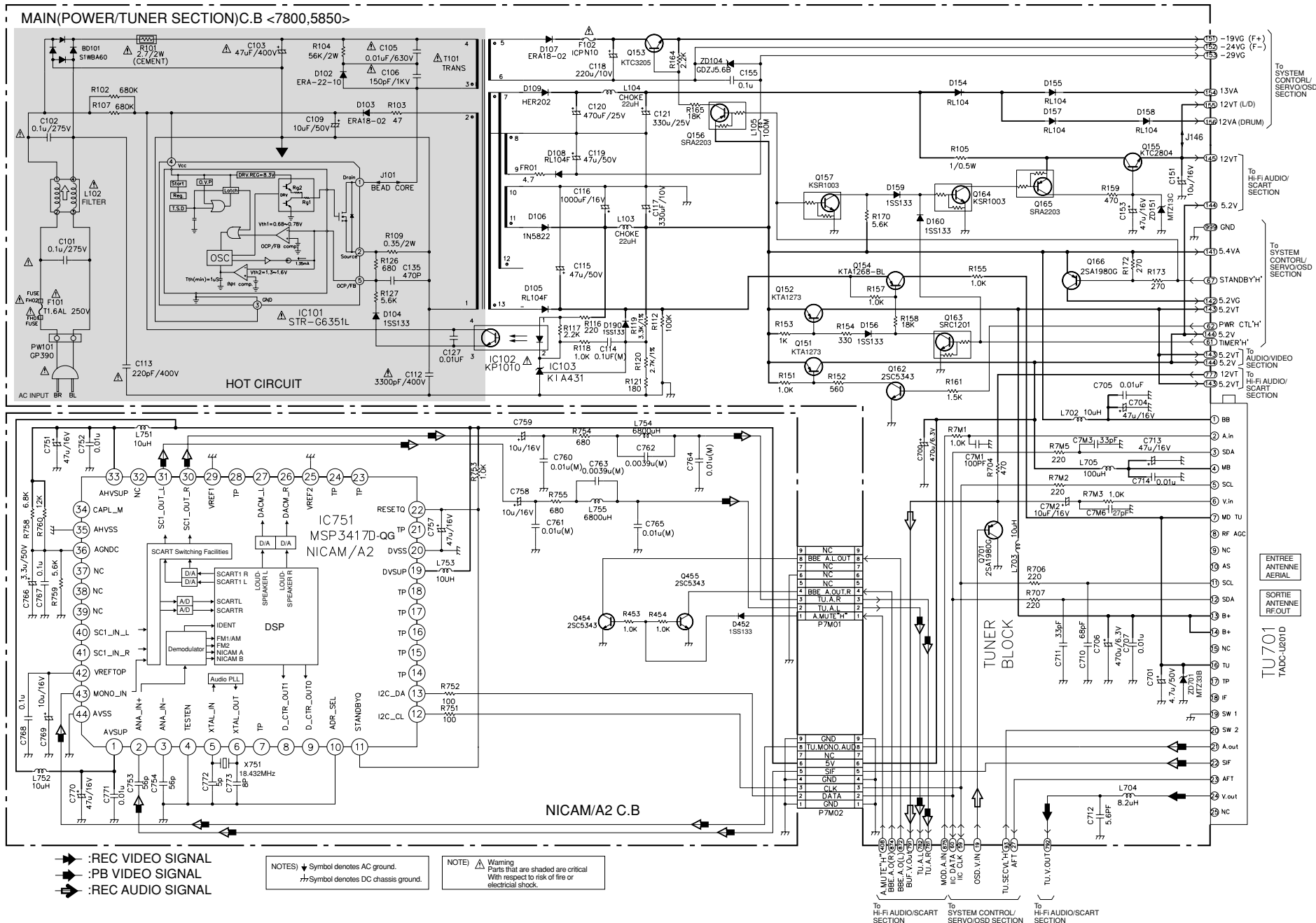
BLOCK DIAGRAM - 7/8 (SYSTEM CONTROL/SERVO/OSD SECTION) <HV-FX7800/FX5850>



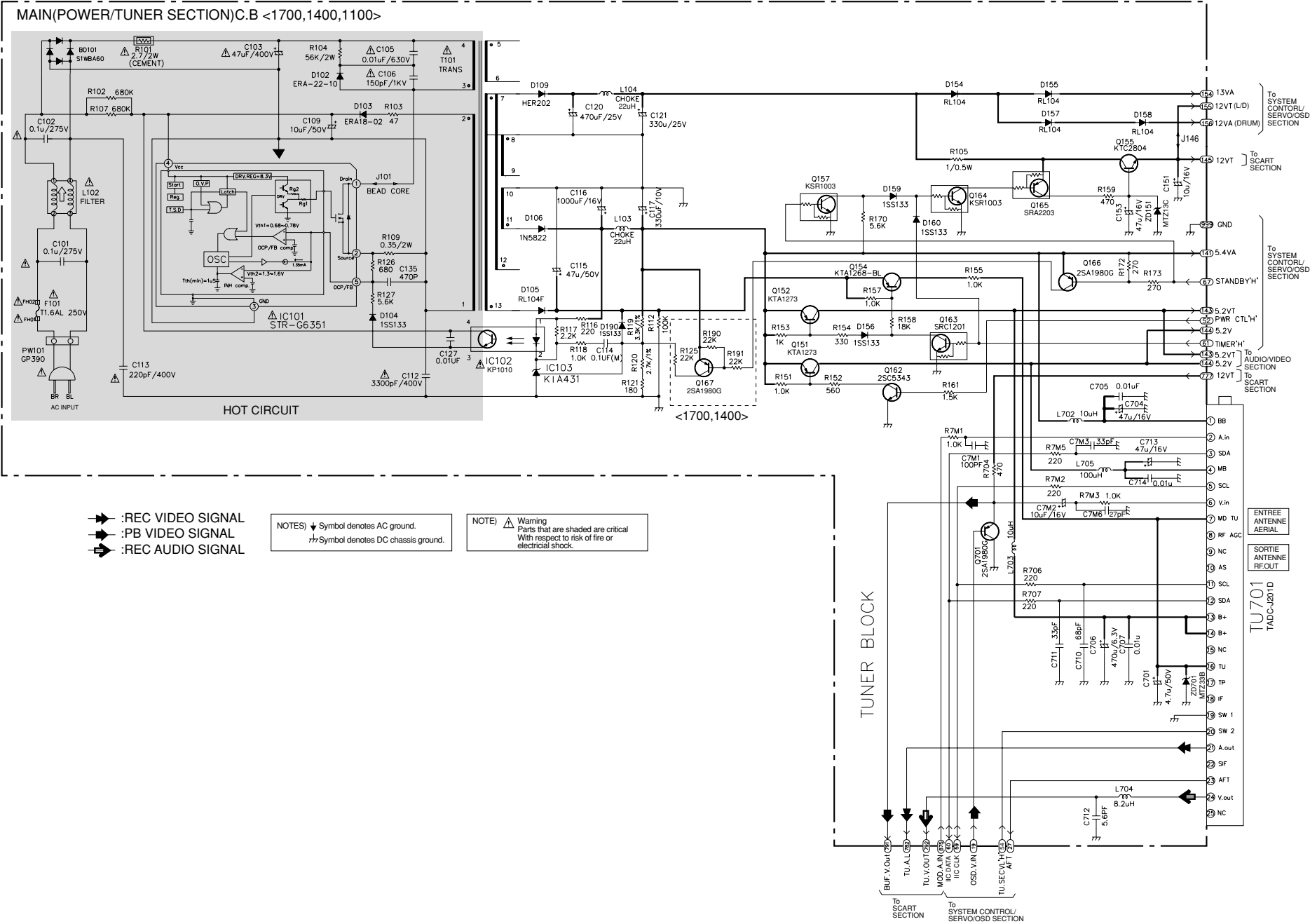
BLOCK DIAGRAM -8/8 (SYSTEM CONTROL/SERVO/OSD SECTION) <HV-GX1700/GX1400/GX1100>



SCHEMATIC DIAGRAM - 1/12 (POWER/TUNER/NICAM SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 2/12 (POWER/TUNER SECTION) <HV-GX1700/GX1400/GX1100>



VOLTAGE CHART - 1/4 (POWER/NICAM SECTION)

IC101

	PB		REC	
	PB	REC	PB	REC
1	AC 440Vp-p	AC 450Vp-p		
2	0.014	0.015		
3	0	0		
4	18.4	18.7		
5	0.2	0.2		

TRANSISTOR

	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q151	5.3	5.3	5.2	5.2	4.6	4.6
Q152	5.3	5.3	5.2	5.2	4.5	4.5
Q153	18.3	18.8	18.2	18.7	17.7	18.1
Q154	31.5	32.1	31.4	32.1	30.9	31.4
Q155	12.1	12.1	14.2	14.4	12.7	12.7
Q156	5.3	5.3	5.3	5.3	0.8	0.8
Q157	0	0	5.1	5.1	0.9	0.9
Q162	0	0	0	0	0.7	0.7
Q163	0	0	0	0	5.2	5.2
Q164	0	0	0	0	4.7	4.7
Q165	14.2	14.4	14.1	14.3	0	0
Q166	5.3	5.3	5.3	5.3	4.5	4.5
Q167	5.3	5.3	0.0	0.0	5.2	5.0
Q701	3.1	3.3	0	0	2.4	2.6

IC102

	PB		REC	
	PB	REC	PB	REC
4	18.4	4.2	18.8	4.1
IC102				
1				
PB	5.2	4.2		
REC	5.2	4.2		

IC103

	Gate		Anode		Cathode	
	PB	REC	PB	REC	PB	REC
IC103	2.5	2.5	0	0	4.1	4.2

NOTE:
Voltage are DC-measured with a digital voltmeter during TUNER mode.

VOLTAGE CHART - 2/4 (AUDIO/VIDEO SECTION)

IC301

PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC
1	2.44	2.42	21	2.41	2.52	41	2.93	2.92	61	3.43	3.43	81	0	0
2	2.44	2.42	22	0	0	42	3.16	3.14	62	3.31	3.32	82	0.03	0.04
3	2.46	2.44	23	4.48	4.52	43	3.02	2.05	63	5	5	83	0	0
4	2.45	2.35	24	4.19	4.23	44	0	0	64	5	5	84	0.03	0.03
5	0.09	0.88	25	1.69	1.69	45	2.34	2.33	65	2.03	2.03	85	0.03	0.03
6	2.46	2.34	26	0.05	0.06	46	1.46	1.44	66	2.66	2.67	86	0	0
7	2.46	2.34	27	0.34	0.34	47	9.13	9.12	67	3.87	3.86	87	4.87	4.80
8	0	0	28	0.34	0.34	48	1.94	1.96	68	0	0	88	1.83	3.97
9	0	0	29	1.78	1.84	49	0.85	0.85	69	0.80	1.27	89	0	0
10	0.93	0.93	30	1.10	4.57	50	0	0	70	1.98	2.92	90	1.83	3.95
11	1.68	1.68	31	2.97	2.94	51	1.83	1.82	71	2.52	2.51	91	1.83	3.98
12	4.98	2.60	32	-	2.3	52	2.71	2.62	72	3.37	1.73	92	0.02	1.55
13	1.49	1.52	33	1.45	1.37	53	0	0	73	3.8	3.17	93	2.17	0.01
14	1.68	1.38	34	1.81	1.79	54	2.62	2.62	74	1.55	0.01	94	0	2.01
15	2.34	2.32	35	3.25	3.22	55	4.91	4.91	75	4.96	4.94	95	0	0
16	5.01	5.02	36	1.82	1.95	56	0.56	0.57	76	2.43	2.41	96	2.29	2.38
17	3.08	0.15	37	4.79	4.79	57	3.44	3.44	77	0.01	0.14	97	0	0
18	1.98	2.45	38	1.81	2.25	58	5.00	5.00	78	2.42	2.42	98	2.43	2.41
19	1.18	2.45	39	4.10	4.10	59	3.36	3.37	79	2.46	2.45	99	5.08	4.28
20	3.01	3.05	40	5.00	5.00	60	3.31	3.31	80	2.43	2.23	100	2.43	2.60

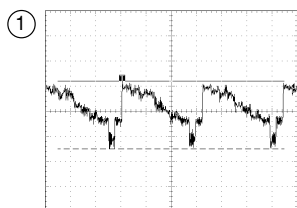
IC7V1

PIN	PB/ REC
1	0
2	2.7
3	5.1
4	5.1
5	0
6	4.8
7	4.9
8	5.1
9	4.8
10	0
11	2.2
12	2.2
13	1.0
14	0
15	5.1
16	3.1
17	2.6
18	4.7
19	5.1
20	5.1
21	0
22	4.5
23	5.1
24	5.1

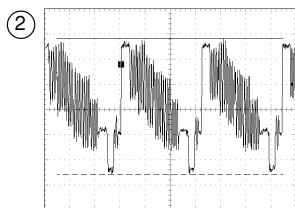
TRANSISTOR

	PB mode			REC mode		
	E	C	B	E	C	B
Q301	1.213	3.930	1.864	1.783	3.348	2.435
Q302	1.548	5.158	2.191	1.813	5.147	2.452
Q303	2.151	0	1.499	2.147	0	1.494
Q304	1.217	5.061	1.835	1.216	5.039	1.824
Q305	2.383	0	1.705	2.420	0	1.749
Q307	5.258	0.280	5.176	5.186	3.301	4.352
Q308	0	0	0.744	15.624	0	-21.49
Q309	0	0	0.720	-5.69	0	-21.77
Q310	5.256	5.180	4.583	5.189	-21.64	5.148
Q311	1.224	3.923	1.872	0.271	3.190	0.636
Q3A1	0	5.251	0	1.258	5.179	1.766
Q201	1.313	5.135	1.924	0.625	5.115	0.092
Q202	1.314	5.135	1.237	0.624	5.120	1.219
Q203	0	1.924	0.016	0	0.092	5.111

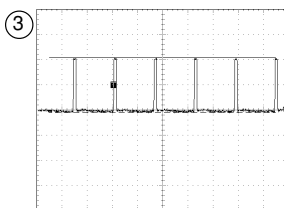
WAVEFORMS-1/2 (AUDIO/VIDEO SECTION)



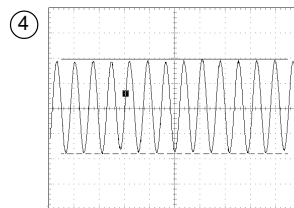
IC301 Pin ②①
500mVp-p
PB mode



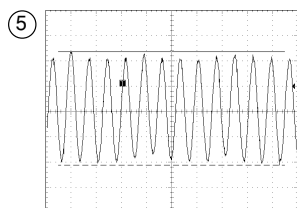
IC301 Pin ③①, ③②, ③③
1Vp-p
Video in



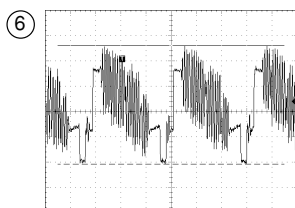
IC301 Pin ②⑧
4.2Vp-p
PB/REC modes



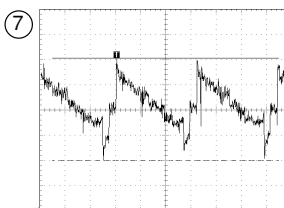
IC301 Pin ⑦
1.4Vp-p
REC mode



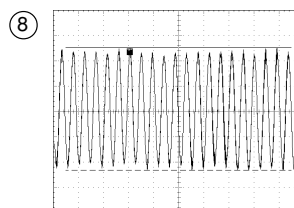
IC301 Pin ⑥
2.2Vp-p
REC mode



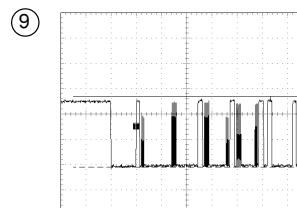
IC301 Pin ②⑨
2.1Vp-p
PB mode



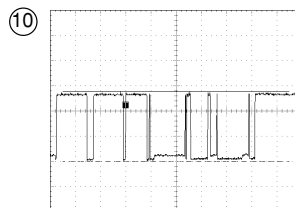
IC301 Pin ④①
400mVp-p
PB mode



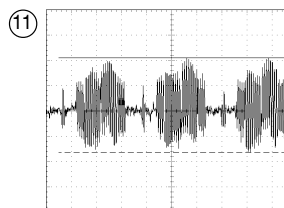
IC301 Pin ⑥⑦
600mVp-p
PB mode



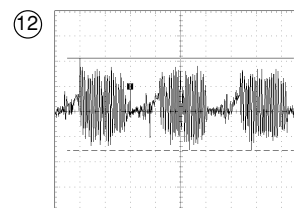
IC301 Pin ②③
5Vp-p
PB/REC modes



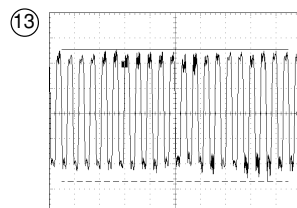
IC301 Pin ②④
5Vp-p
PB/REC modes



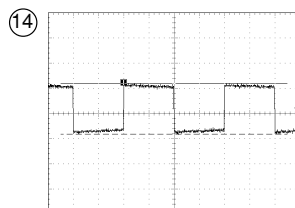
IC301 Pin ⑦①, ⑦②
340mVp-p
REC mode



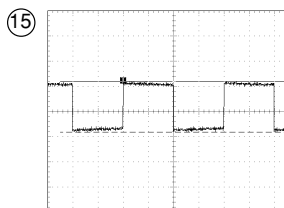
IC301 Pin ⑤①, ⑤②, ⑤④
300mVp-p
PB mode



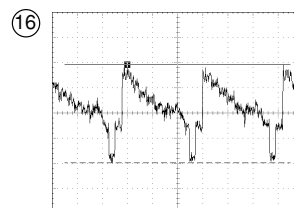
IC301 Pin ⑥⑥
600mVp-p
PB mode



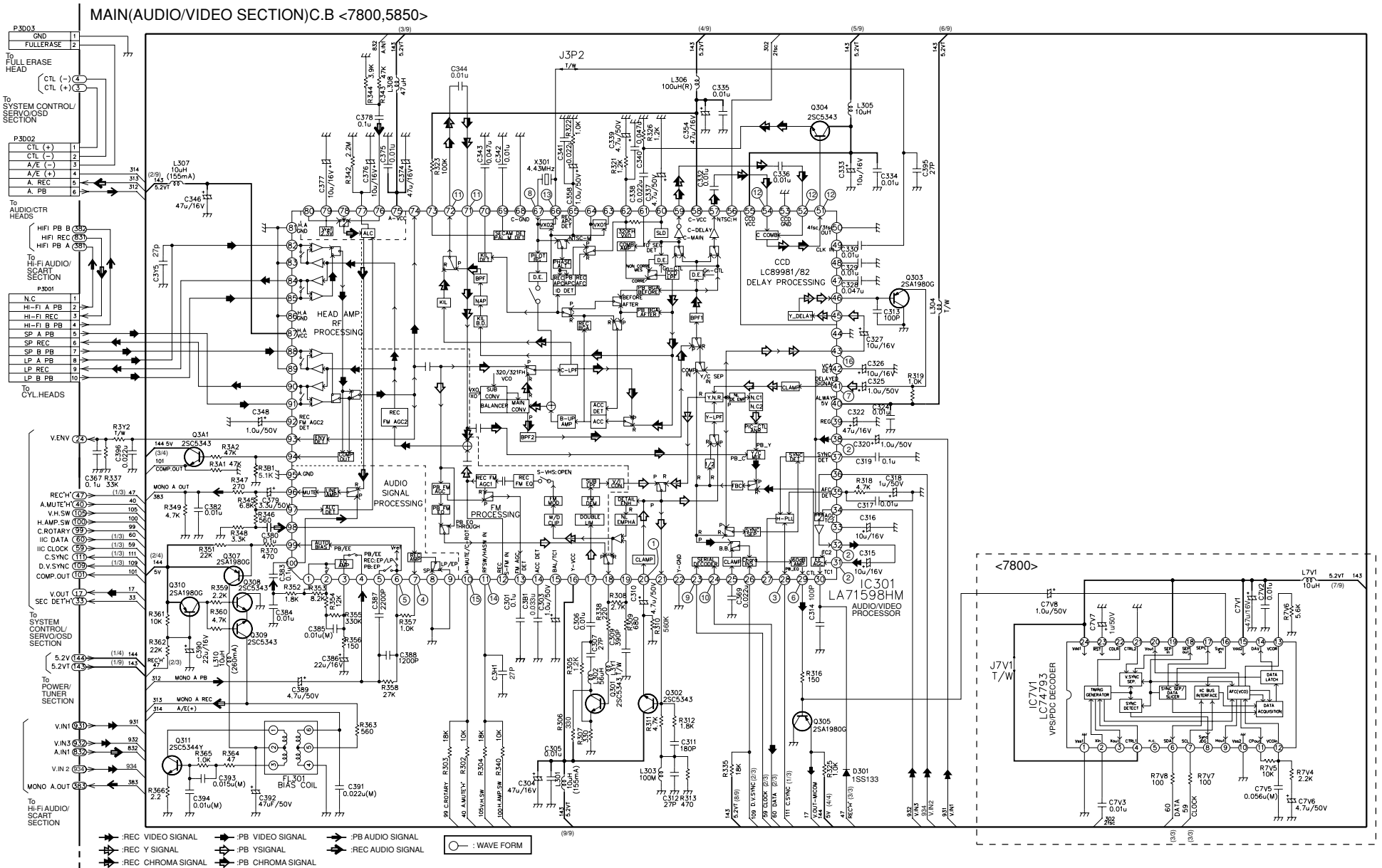
IC301 Pin ①①
3.2Vp-p
PB mode



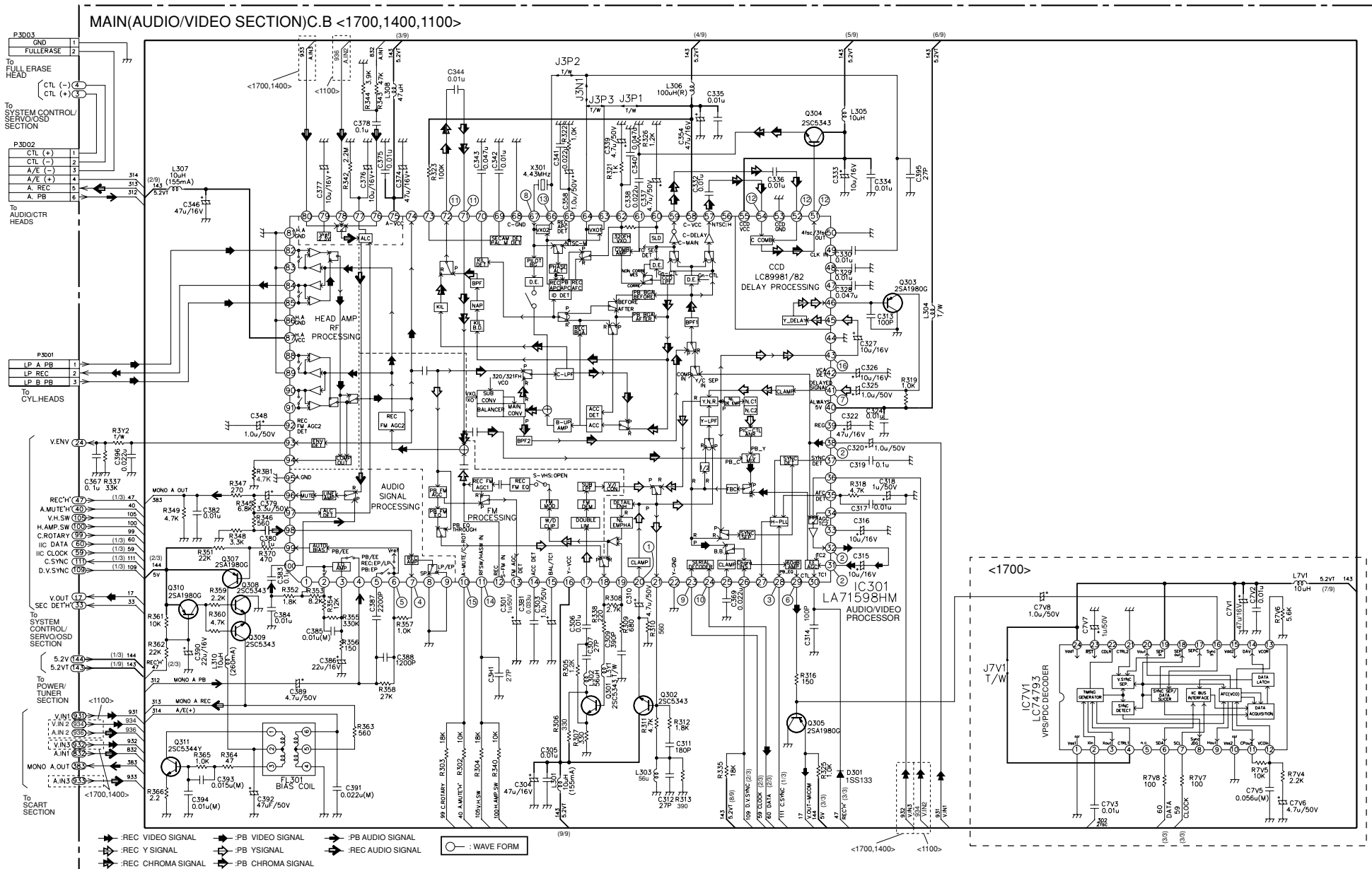
IC301 Pin ①①
1.8Vp-p
PB mode



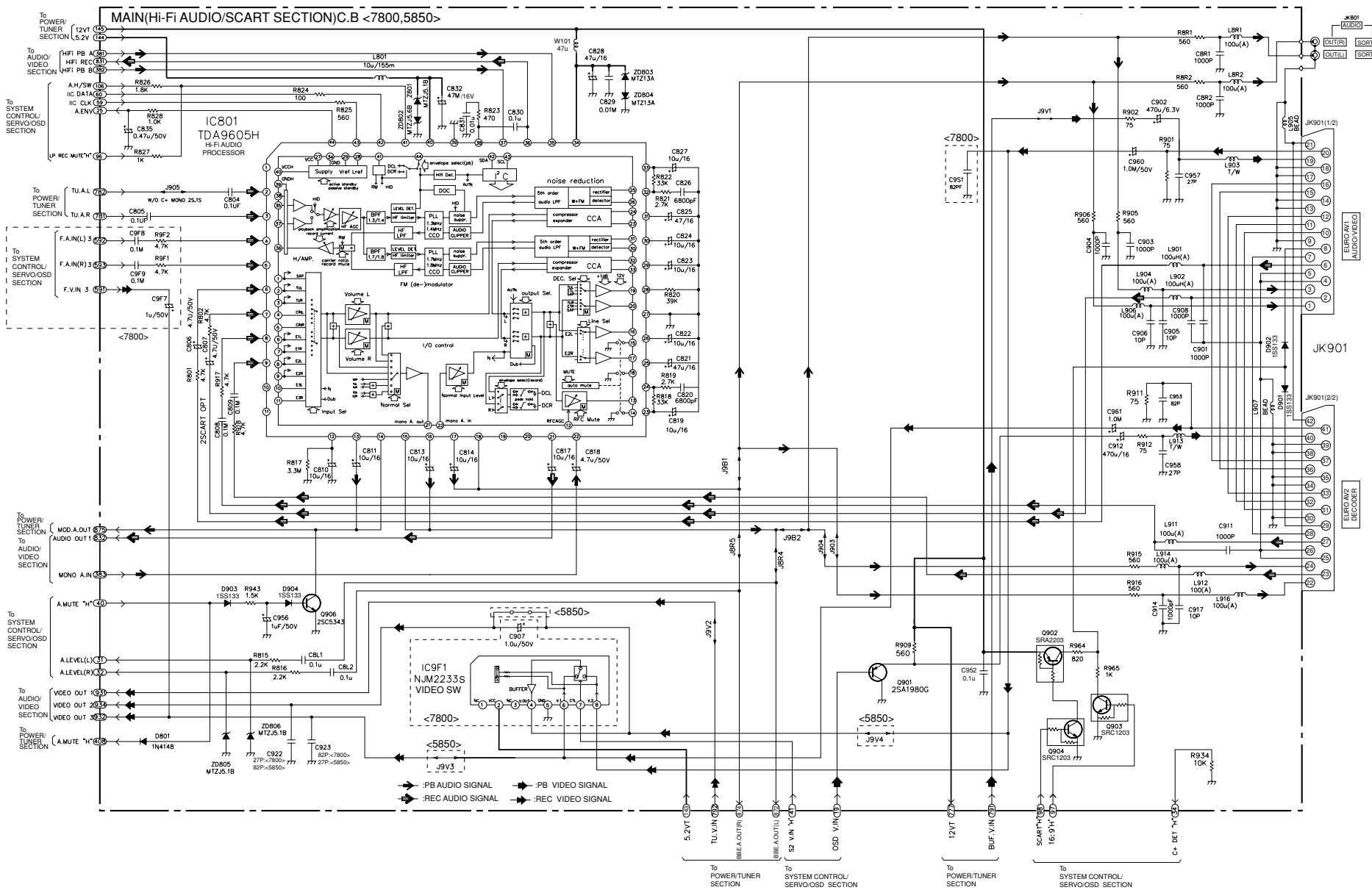
IC301 Pin ④③
400mVp-p
PB mode



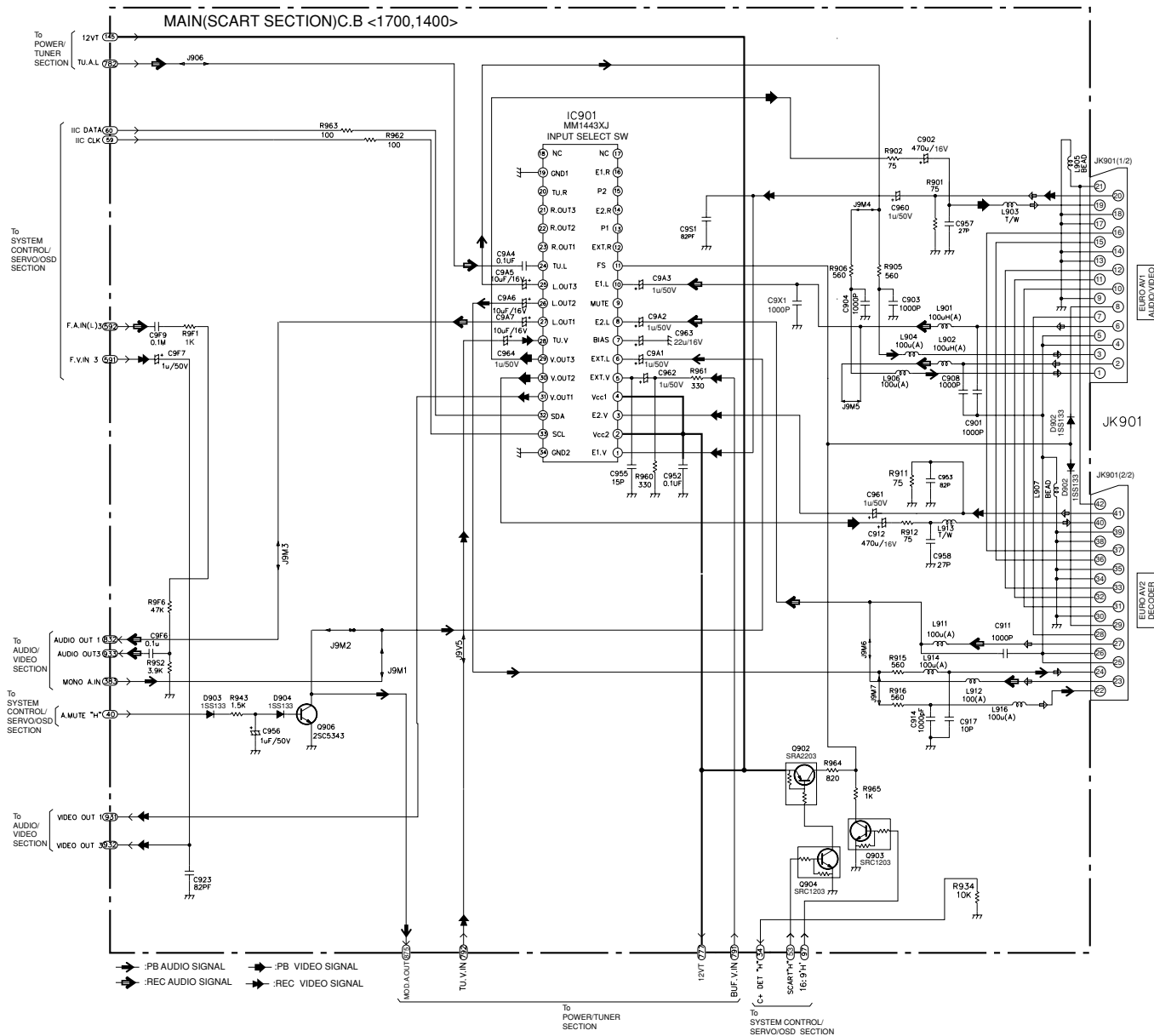
SCHEMATIC DIAGRAM - 4/12 (AUDIO/VIDEO SECTION) <HV-GX1700/GX1400/GX1100>



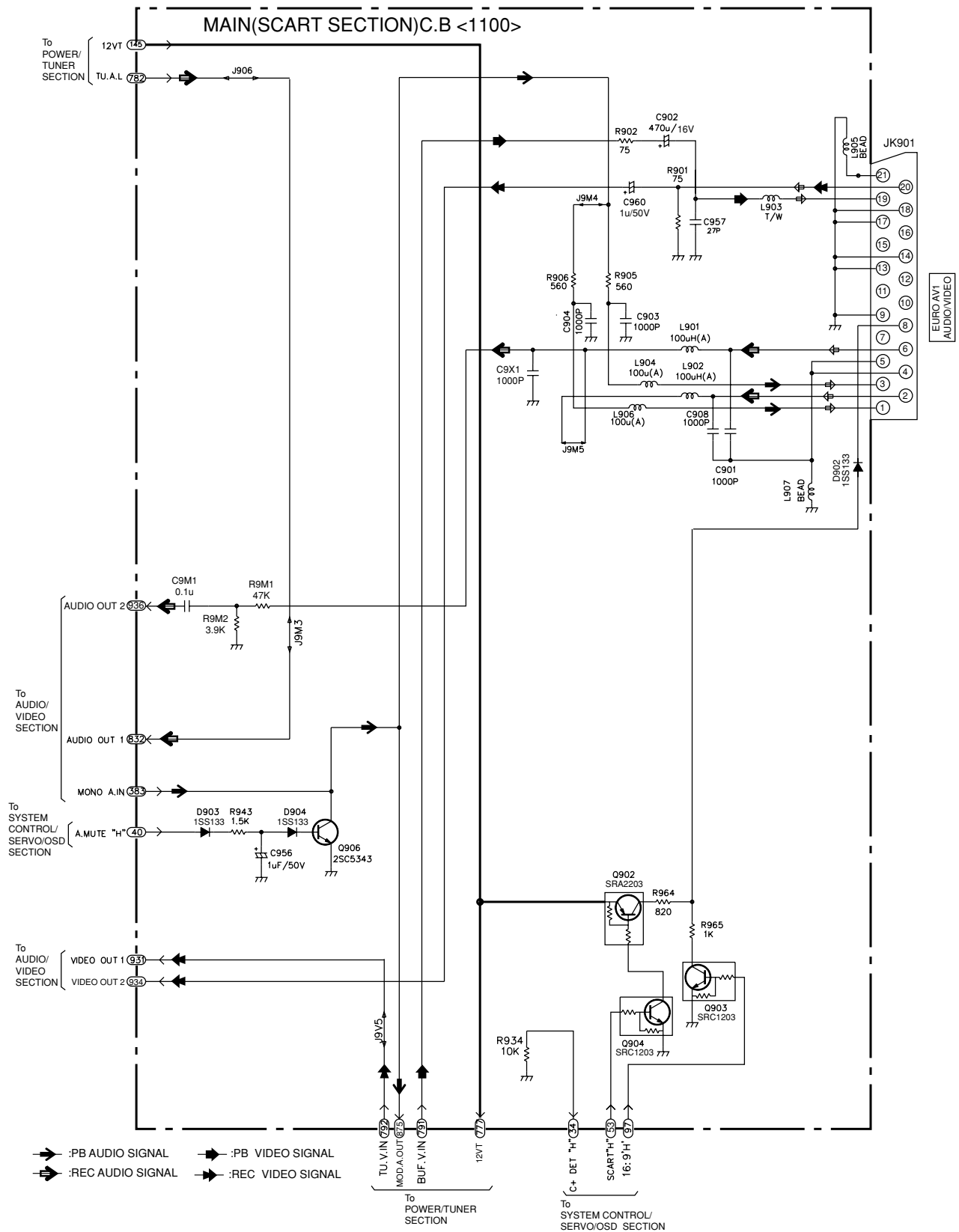
SCHEMATIC DIAGRAM - 5/12 (SCART SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 6/12 (SCART SECTION) <HV-GX1700/GX1400>



SCHEMATIC DIAGRAM - 7/12 (SCART SECTION) <HV-GX1100>



VOLTAGE CHART -3/4 (Hi-Fi AUDIO/SCART SECTION)

IC801

PB	3.6	4.4	4.2	0.9	5.1	0.0	0.0	0.7	0.6	0.7	11.9	3.9	3.9	3.9	0.8	3.9	3.9	0.0	0.8	3.9	3.9	3.9	
REC	1.9	4.4	4.1	0.9	5.0	0.0	4.2	4.3	4.2	4.3	12.0	3.9	3.9	3.9	0.8	3.9	3.9	0.0	0.8	3.9	3.9	3.9	
				40				35				30				25							
IC801(TDA9605H)																							
				5				1				0				15				20			
PB	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	0.0	3.9	0.0	0.0	6.0	6.0	0.0	6.0	6.0	4.5	3.8	
REC	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.9	3.9	0.0	3.8	0.0	0.0	6.0	6.0	0.0	6.0	6.1	4.6	3.8	

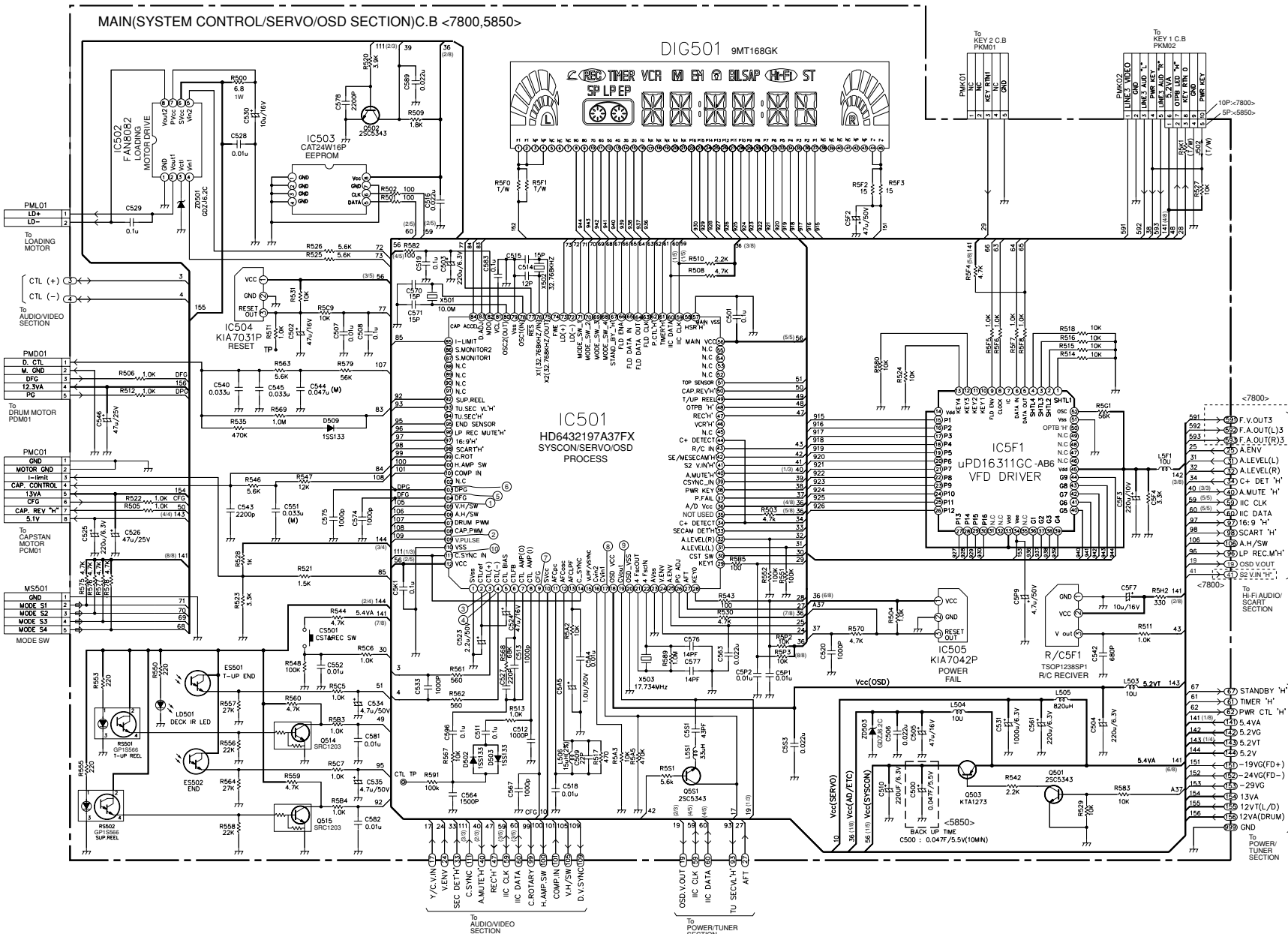
IC901

PB	0	4.8	4.7	3.8	1.5	1.5	3.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0	0
REC	0	4.8	4.7	3.8	1.5	1.5	3.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0	0
<div><div></div><div>30</div><div>25</div><div>20</div></div>																
IC901(MM1443)																
<div><div></div><div>5</div><div>1</div><div>0</div><div>15</div></div>																
PB	2.7	11.6	2.7	11.6	3.5	5.5	5.5	5.5	0	5.5	11.7	5.5	0	5.5	0	5.5
REC	2.7	11.6	2.7	11.6	3.5	5.5	5.5	5.5	0	5.5	11.7	5.5	0	5.5	0	5.5

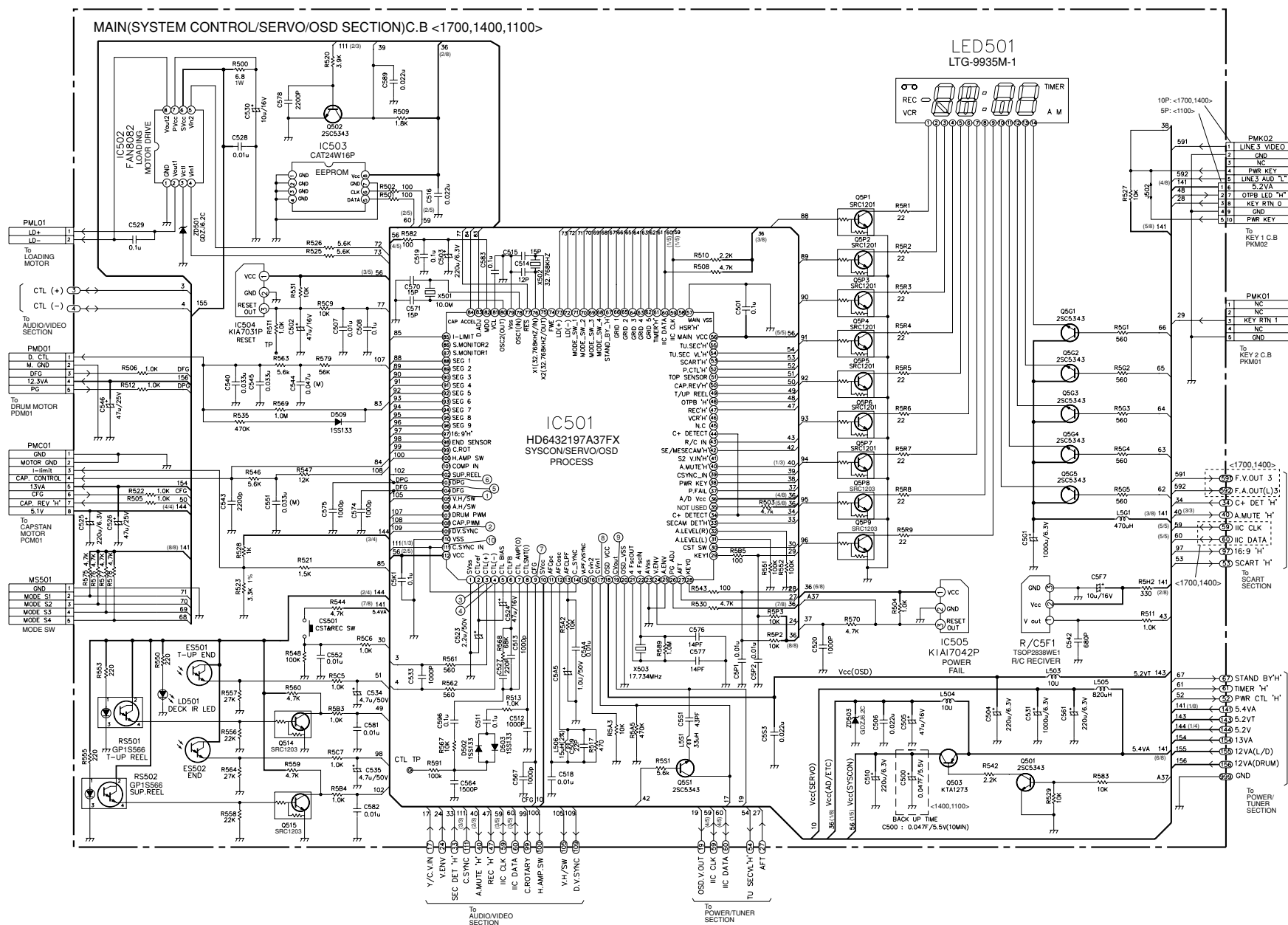
IC9F1

	1	2	3	4	5	6	7	8
PB	—	5.2	—	—	0	—	0	—
REC	—	5.2	—	—	0	—	0	—

SCHEMATIC DIAGRAM - 8/12 (SYSTEM CONTROL/SERVO/OSC SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 9/12 (SYSTEM CONTROL/SERVO/OSC SECTION) <HV-GX1700/GX1400/GX1100>



VOLTAGE CHART -4/4 (SYSTEM CONTROL/SERVO/OSD SECTION)

IC501

PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC
1	0	0	21	2.45	2.47	41	0	0	61	5.15	PULSE	81	3.37	3.37	101	0	1.44
2	2.54	2.54	22	2.42	2.42	42	0	0	62	PULSE	PULSE	82	5.26	5.26	102	H/L	H/L
3	2.54	H/L	23	0	0	43	5.05	5.05	63	PULSE	PULSE	83	2.5	2.5	103	PULSE	PULSE
4	2.54	H/L	24	2.30	0	44	0	0	64	PULSE	PULSE	84	2.78	2.79	104	PULSE	PULSE
5	2.54	2.53	25	0	0	45	5.25	5.28	65	PULSE	PULSE	85	3.12	3.10	105	H/L	H/L
6	2.56	2.54	26	5.28	5.27	46	0	0	66	PULSE	PULSE	86	H/L	H/L	106	H/L	H/L
7	2.65	2.65	27	4.67	4.71	47	0	5.23	67	0.85	0.85	87	PULSE	PULSE	107	H/L	H/L
8	2.59	2.59	28	5.28	5.28	48	0	0	68	5.30	5.30	88	PULSE	PULSE	108	H/L	H/L
9	PULSE	PULSE	29	5.28	5.28	49	H/L	H/L	69	0	0	89	PULSE	PULSE	109	0	0
10	5.25	5.25	30	5.04	5.04	50	0	0	70	5.30	5.30	90	PULSE	PULSE	110	0	0
11	1.91	1.91	31	0	0	51	0	0	71	5.30	5.30	91	PULSE	PULSE	111	PULSE	PULSE
12	1.92	1.92	32	0	0	52	0	0	72	5.20	5.20	92	PULSE	PULSE	112	5.26	5.26
13	2.23	2.50	33	0.47	0.44	53	0	0	73	5.20	5.20	93	PULSE	PULSE			
14	PULSE	PULSE	34	0	0	54	3.18	3.20	74	0	0	94	PULSE	PULSE			
15	0.37	0.37	35	5.28	5.28	55	5.25	5.25	75	1.57	1.58	95	PULSE	PULSE			
16	2.01	2.01	36	5.28	5.28	56	5.25	0	76	1.40	1.40	96	PULSE	PULSE			
17	2.41	2.37	37	4.86	4.86	57	0	0	77	5.25	5.25	97	0	0			
18	5.14	5.12	38	5.28	5.28	58	0	PULSE	78	2.56	2.56	98	0	0			
19	2.48	2.42	39	2.17	2.18	59	PULSE	PULSE	79	0	0	99	H/L	H/L			
20	0	0	40	0	0	60	PULSE	5.15	80	2.56	2.56	100	0(SP)	5.25(LP)			

IC502

PB	0.4	12.9	12.9	2.2
REC	0.4	12.9	13.9	2.2
8 5				
IC502				
1 4				
PB	0	0.4	0.4	2.2
REC	0	0.4	0.5	2.2

IC503

PB	5.29	0	Pulse	Pulse
REC	5.29	0	Pulse	Pulse
5				
IC503				
1				
PB	0	0	0	0
REC	0	0	0	0

IC504

PIN	PB/REC
1	5.3
2	0
3	5.2

IC505

PIN	PB/REC
1	5.3
2	0
3	5.2

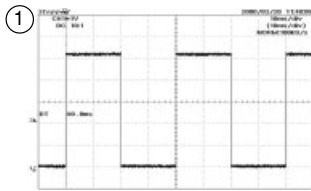
TRANSISTOR

	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q501	0	0	0	0	0.66	0.66
Q502	0	0	2.17	2.18	0.26	0.28
Q503	5.29	5.29	5.27	5.26	4.8	4.59
Q5S1	0.46	0.44	2.43	2.36	0	0
Q514	0	0	H/L	H/L	H/L	H/L
Q515	0	0	H/L	H/L	H/L	H/L
Q5G1	1.7	1.6	4.8	4.8	0.9	0.9
Q5G2	1.9	1.87	4.8	4.8	1.02	1.0
Q5G3	1.9	1.9	4.8	4.8	1.03	1.0
Q5G4	1.9	1.9	4.8	4.8	0.96	1.0
Q5G5	1.9	1.9	4.8	4.8	1.02	0.9
Q5P1	0	0	2.3	2.3	1.04	1.0
Q5P2	0	0	2.8	2.3	0	1.0
Q5P3	0	0	0.5	2.3	1.04	1.0
Q5P4	0	0	2.7	2.6	0	0
Q5P5	0	0	2.7	2.6	0	0
Q5P6	0	0	2.7	2.6	0	0
Q5P7	0	0	0.4	0.4	4.1	4.1
Q5P8	0	0	2.8	2.7	0	0
Q5P9	0	0	2.2	2.2	1.05	0

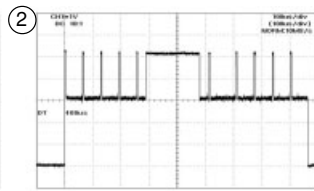
IC5F1

PIN	PB/REC	PIN	PB/REC	PIN	PB/REC	PIN	PB/REC
1	0	14	5.27	27	-30.2	40	-26.9
2	0	15	0	28	-29.3	41	-27.1
3	0	16	-23.6	29	29.3	42	-27.1
4	0	17	-14.2	30	0	43	-27.1
5	5.3	18	-23.6	31	0	44	5.3
6	5.05	19	-29.9	32	-13.7	45	5.3
7	5.27	20	-26.6	33	5.3	46	5.2
8	5.11	21	-9.7	34	-30.4	47	5.3
9	4.89	22	-6.9	35	-3.9	48	0.85
10	0.25	23	-16.5	36	-26.7	49	0
11	0.27	24	-16.5	37	-26.7	50	0
12	0.39	25	-7	38	-26.7	51	0
13	2.77	26	-30.2	39	-26.7	52	0

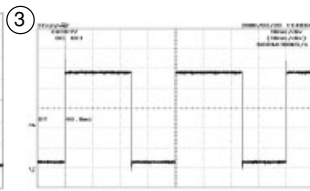
WAVEFORMS -2/2 (SYSTEM CONTROL/SERVO/OSD SECTION)



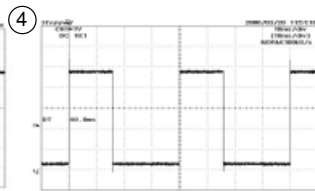
V.H/SW
(IC501 Pin ⑩⑤)
1V/10mS
REC/PB modes



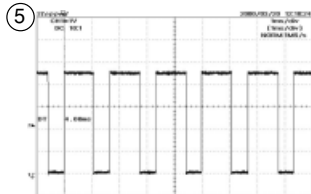
DV-SYNC
(IC501 Pin ⑩⑨)
1V/100μS
QUE/REV modes



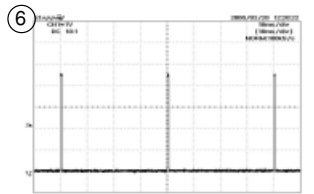
CTL+
(IC501 Pin ③)
1V/10mS



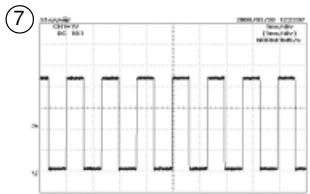
CTL-
(IC501 Pin ④)
1V/10mS



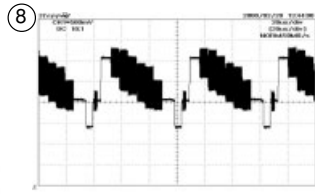
DFG
(IC501 Pin ⑩④)
1V/1mS
REC/PB mode



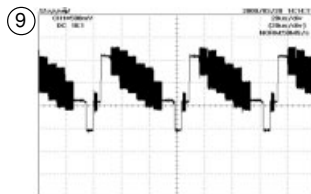
DPG
(IC501 Pin ⑩③)
1V/10mS
REC/PB modes



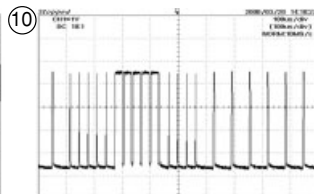
CFG
(IC501 Pin ⑨)
1V/10mS



V-IN
(IC501 Pin ⑰)
500mV/20μS

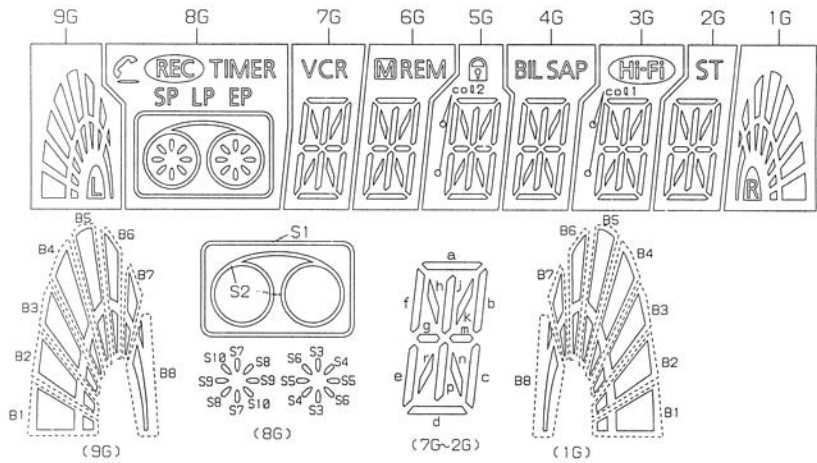


V-OUT
(IC501 Pin ⑱)
500mV/20μS
EE/PB modes



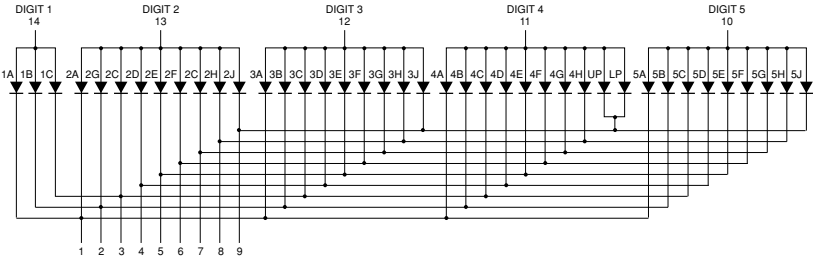
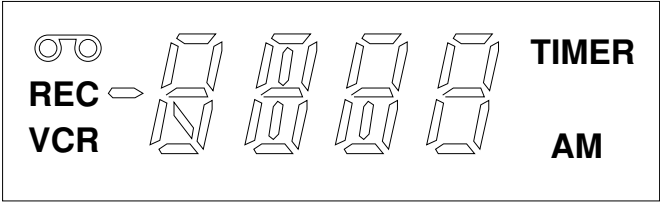
C-SYNC
(IC501 Pin ⑪①)
1V/100μS
EE/PB modes

• GRID ASSIGNMENT



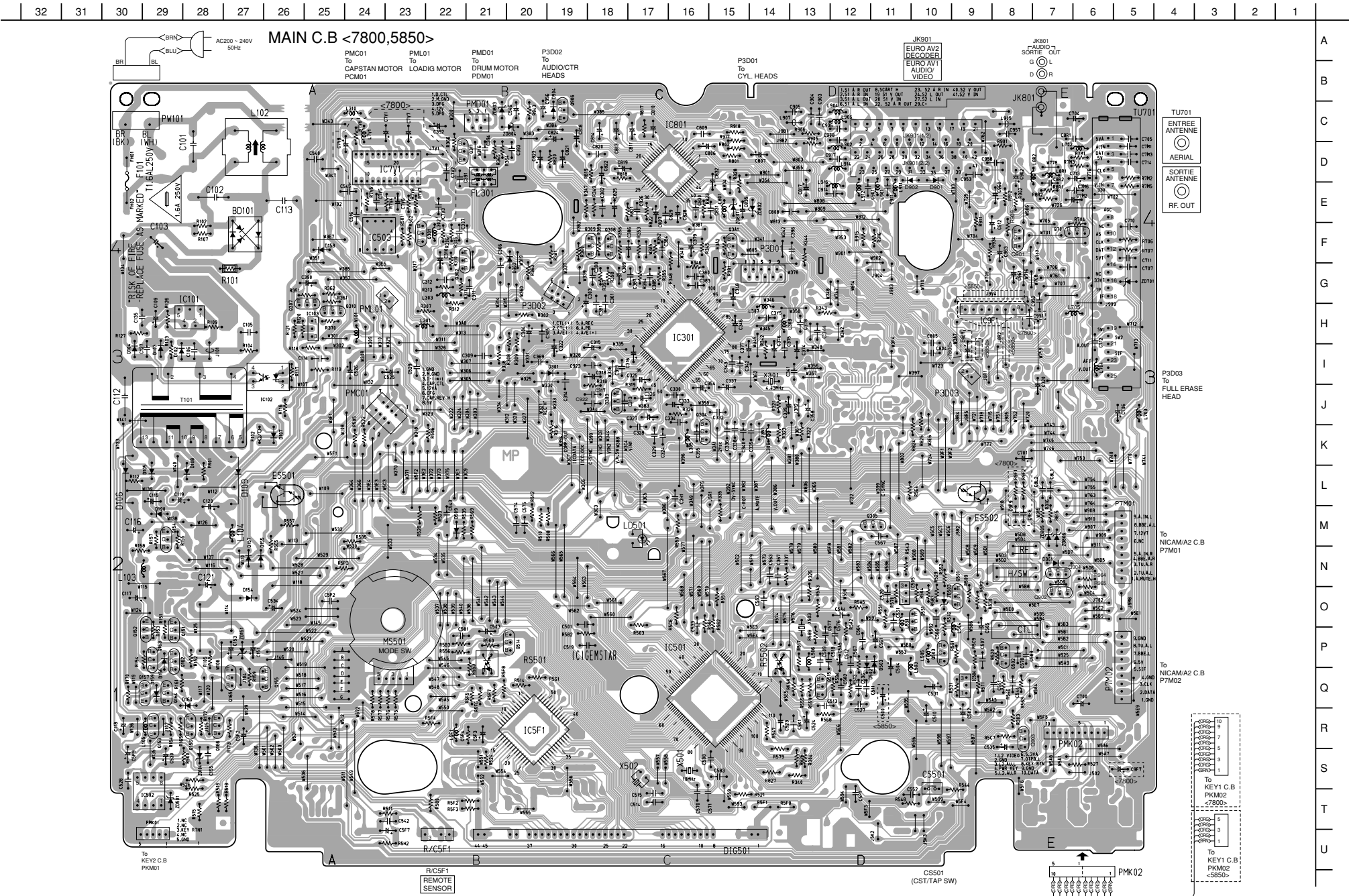
• ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	-	TIMER	VCR	M	REM	SAP	HI-FI	ST	-
P2	-	REC	-	REM	col2	BIL	col1	-	-
P3	B4	a	a	a	a	a	a	a	B4
P4	B5	h	h	h	h	h	h	h	B5
P5	B6	j	j	j	j	j	j	j	B6
P6	B7	k	k	k	k	k	k	k	B7
P7	B8	S1	b	b	b	b	b	b	B8
P8	B3	S2	f	f	f	f	f	f	B3
P9	B2	S3	m	m	m	m	m	m	B2
P10	B1	S4	g	g	g	g	g	g	B1
P11	L	S5	c	c	c	c	c	c	L
P12	-	S6	e	e	e	e	e	e	-
P13	-	S7	r	r	r	r	r	r	-
P14	-	S8	p	p	p	p	p	p	-
P15	-	S9	n	n	n	n	n	n	-
P16	-	S10	d	d	d	d	d	d	-

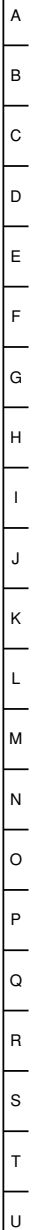


No.	CONNECTION
1	CATHODE 1A,2A,3A,4A,5A
2	CATHODE 1B,2B,3B,4B
3	CATHODE 1C,2C,3C,4C,5C
4	CATHODE 2D,3D,4D,5D
5	CATHODE 2E,3E,4E,5E
6	CATHODE 2F,3F,4F,5F
7	CATHODE 2G,3G,4G,5G
8	CATHODE 2H,3H,4H,5H
9	CATHODE 2J,3J,4J,5J
10	COMMON ANODE (DIGIT 5)
11	COMMON ANODE (DIGIT 4)
12	COMMON ANODE (DIGIT 3)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)

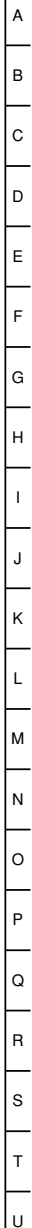
WIRING -1/7 (MAIN C.B) <HV-FX7800/FX5850>

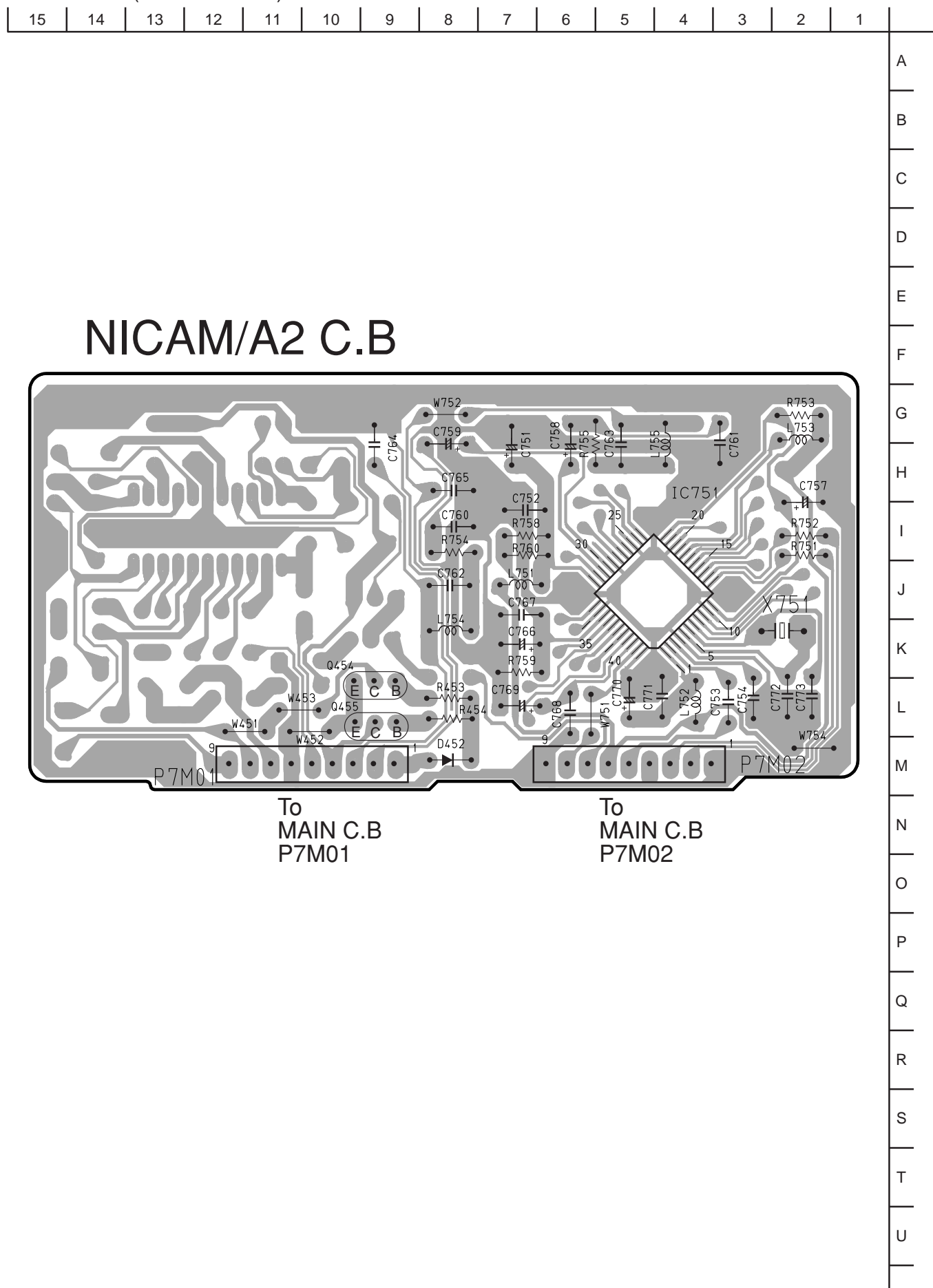


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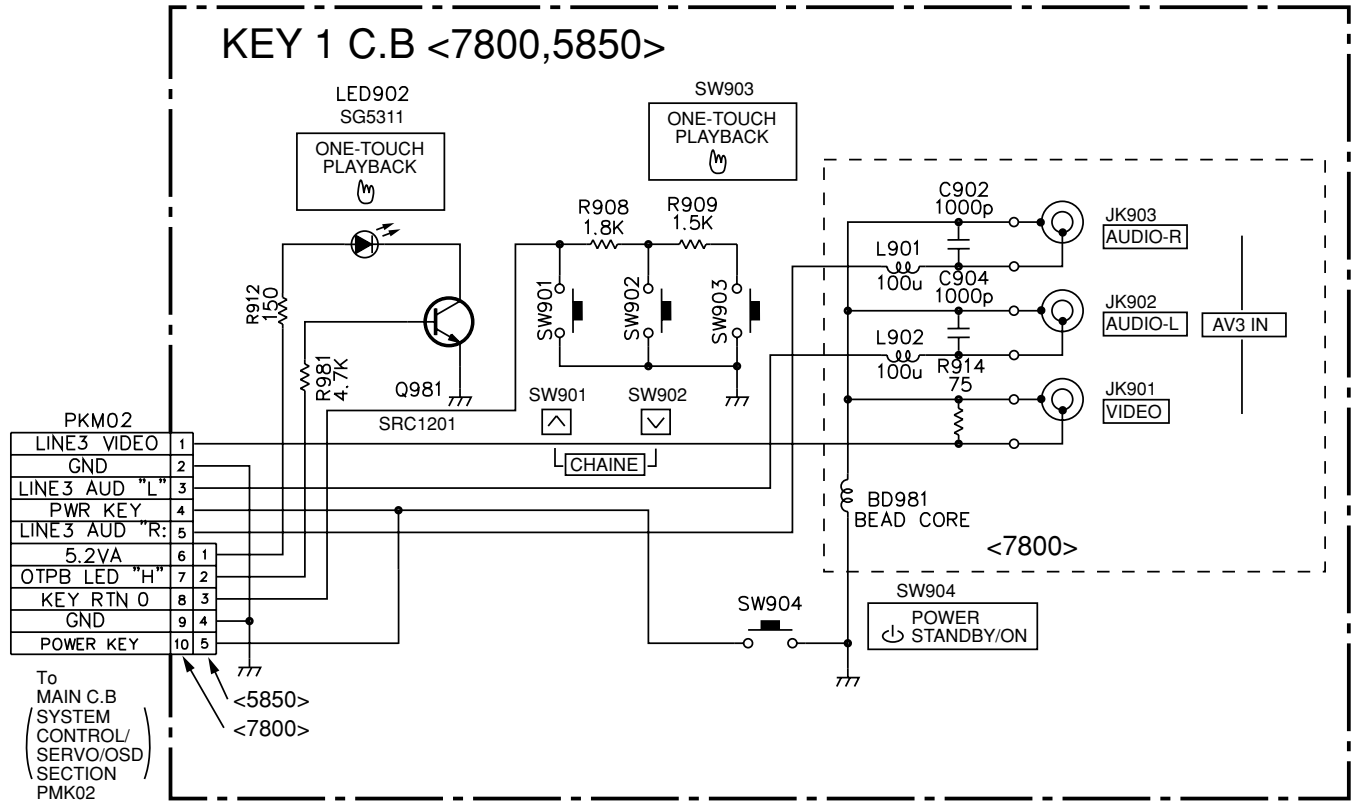


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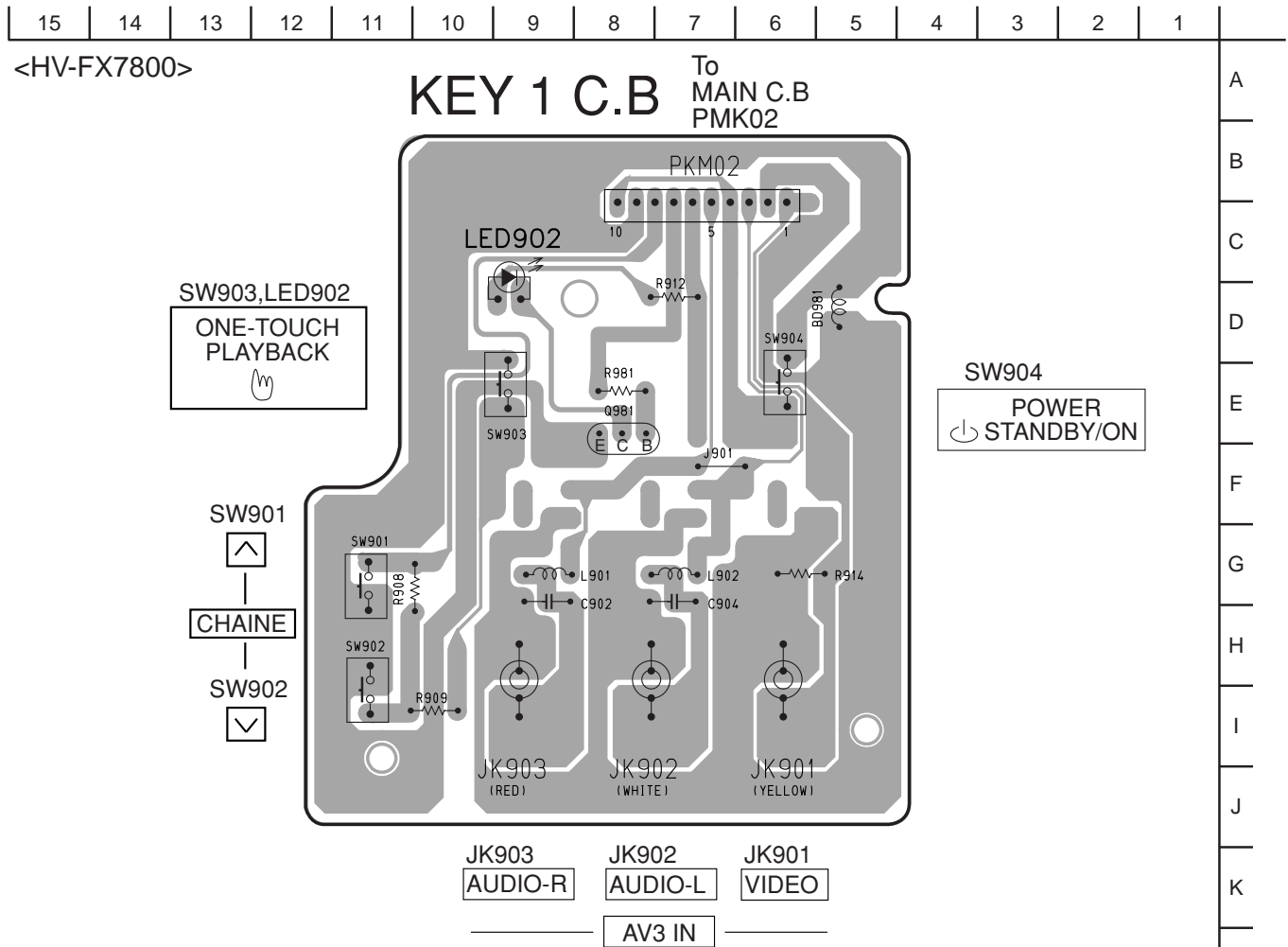




SCHEMATIC DIAGRAM -10/12 (KEY-1 C.B SECTION) <HV-7800/FX5800>

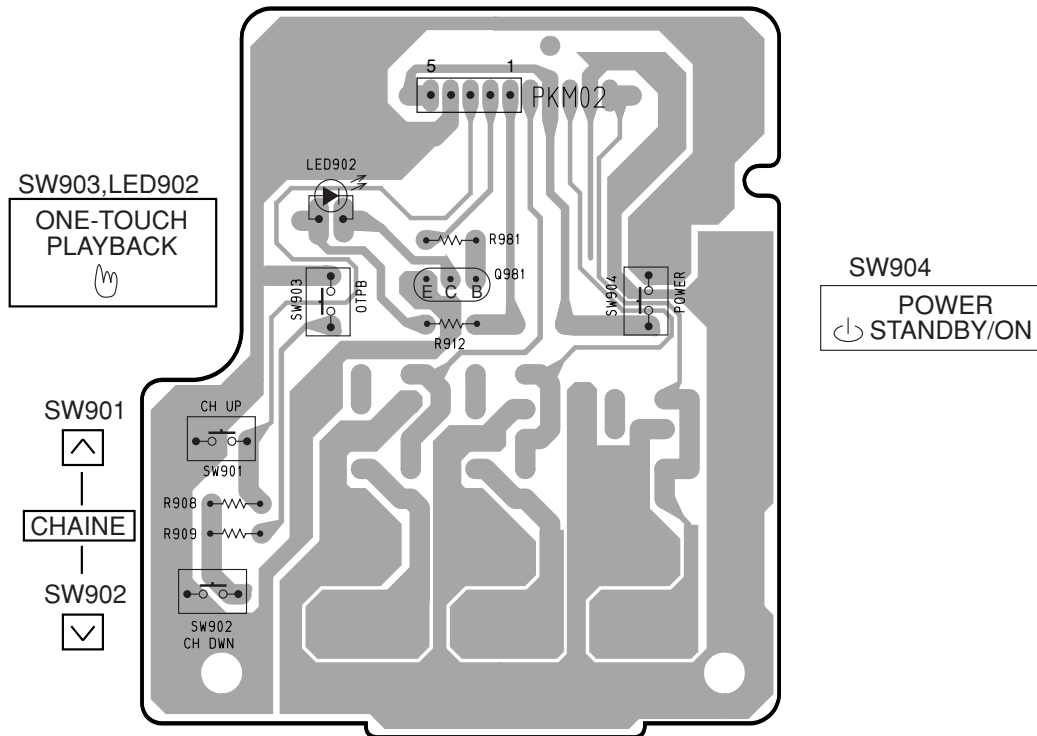


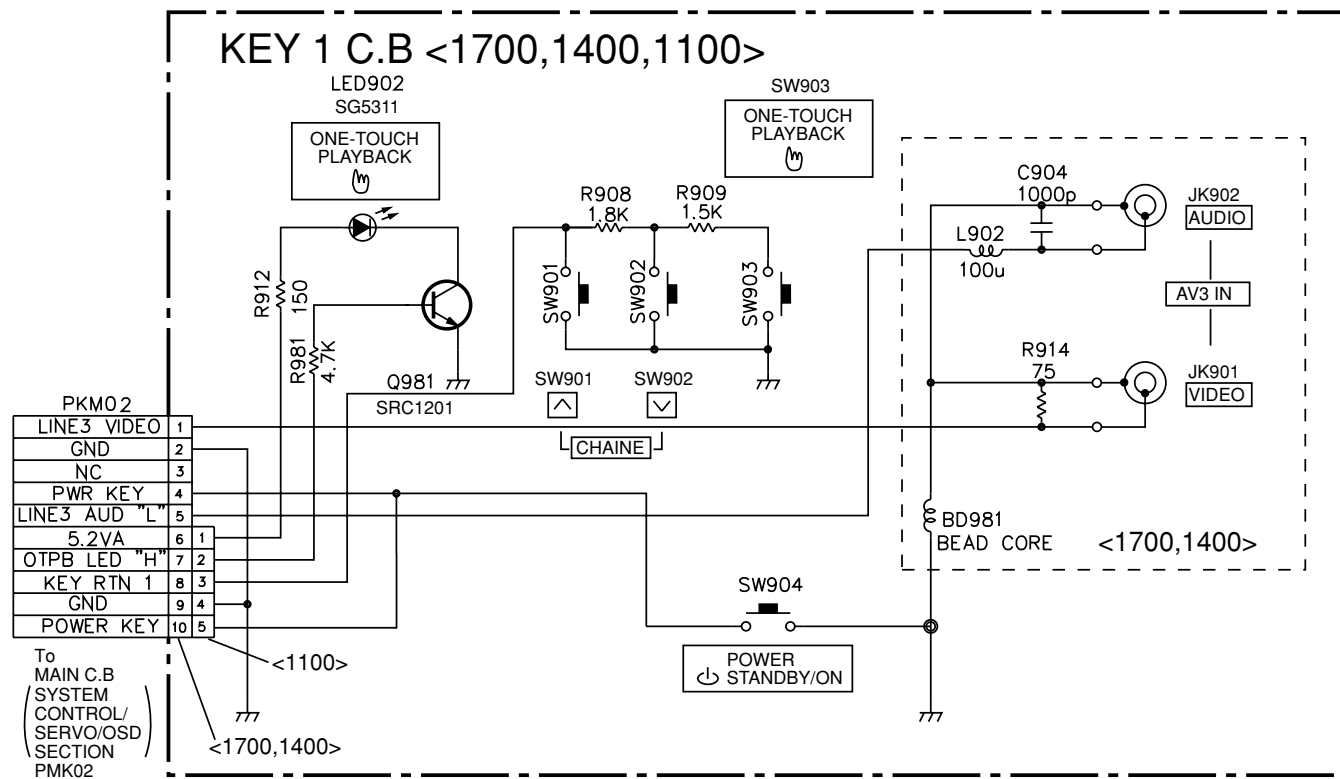
WIRING -5/7 (KEY-1 C.B)



<HV-FX5850>

KEY 1 C.B To MAIN C.B PMK02

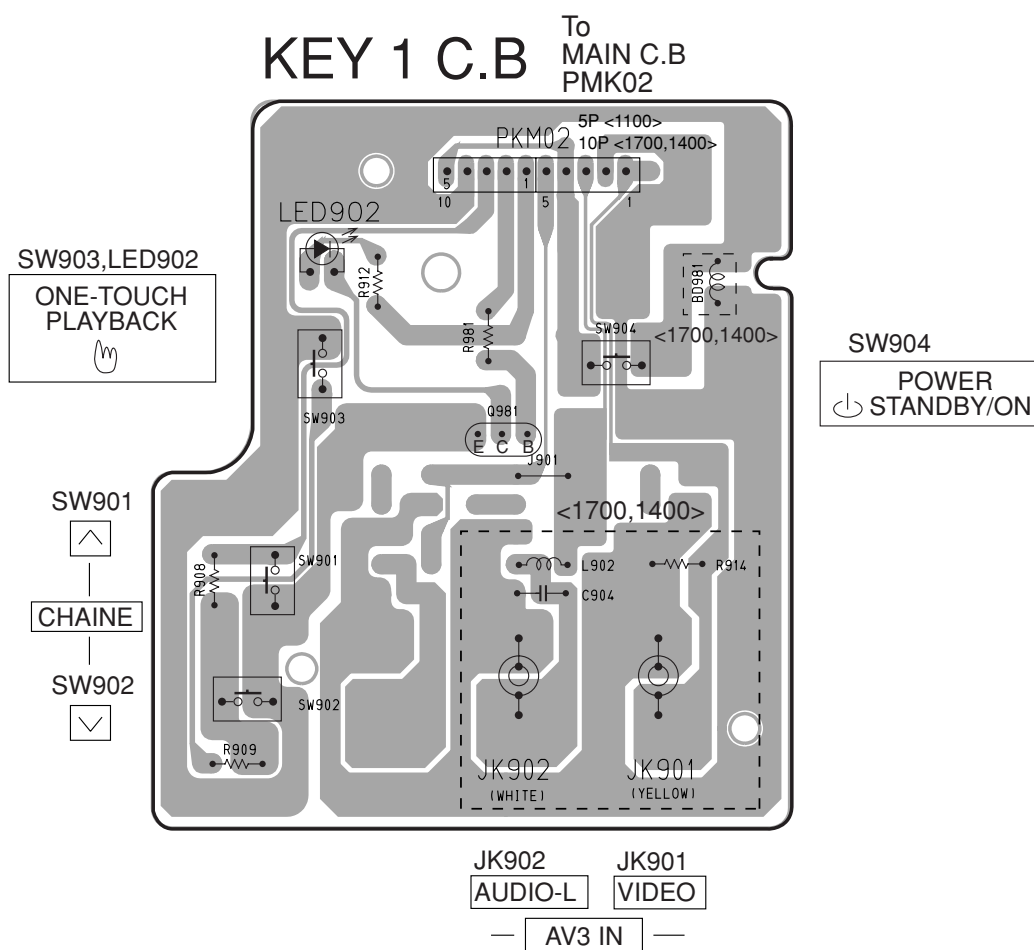


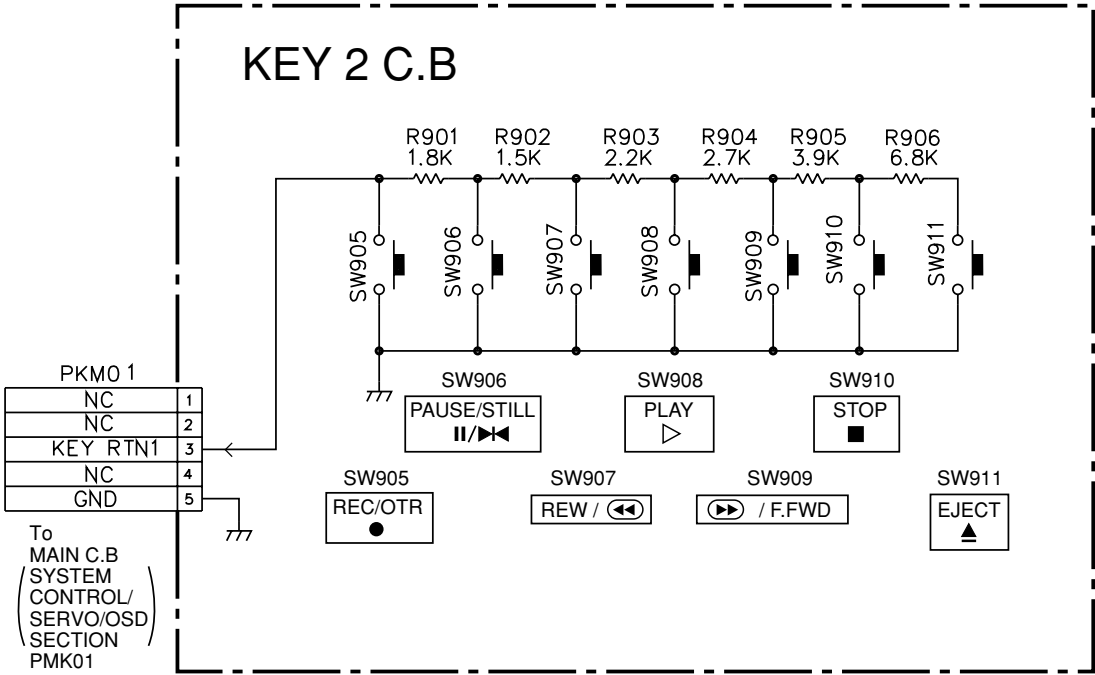


WIRING -6/7 (KEY-1 C.B)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
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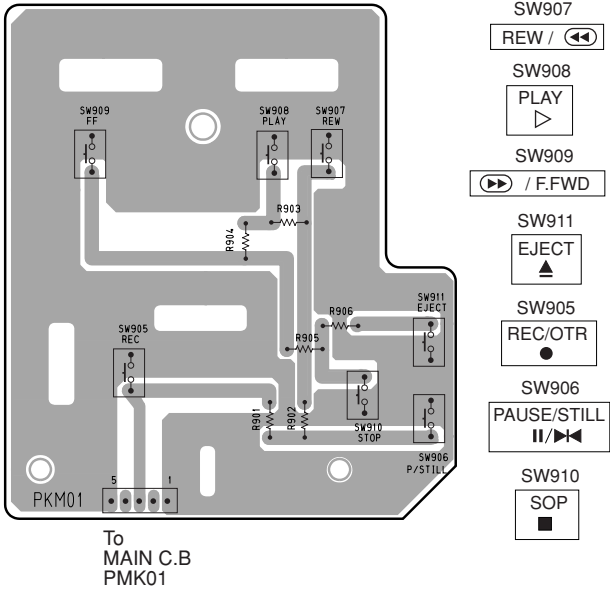
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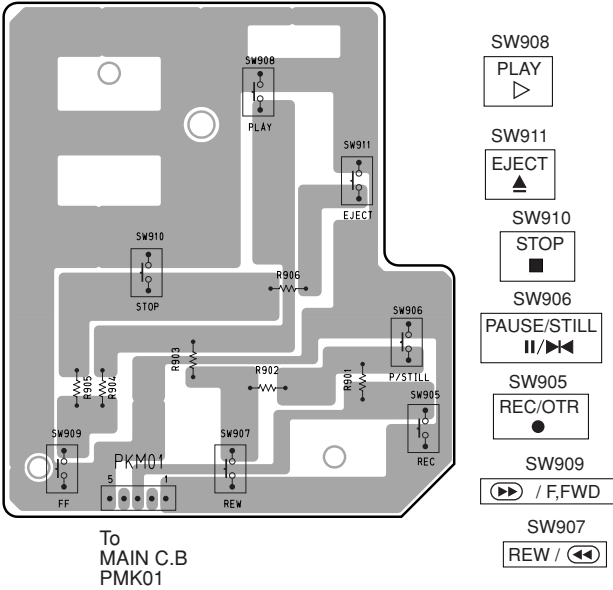
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KEY 2 C.B



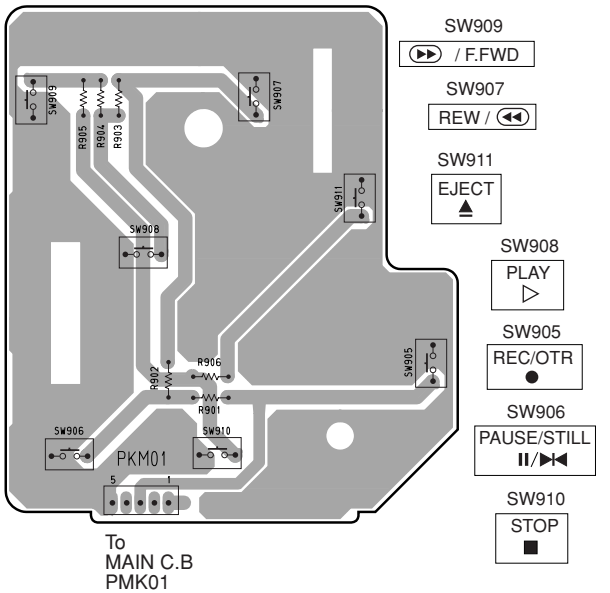
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KEY 2 C.B



<HV-FX5850>

KEY 2 C.B



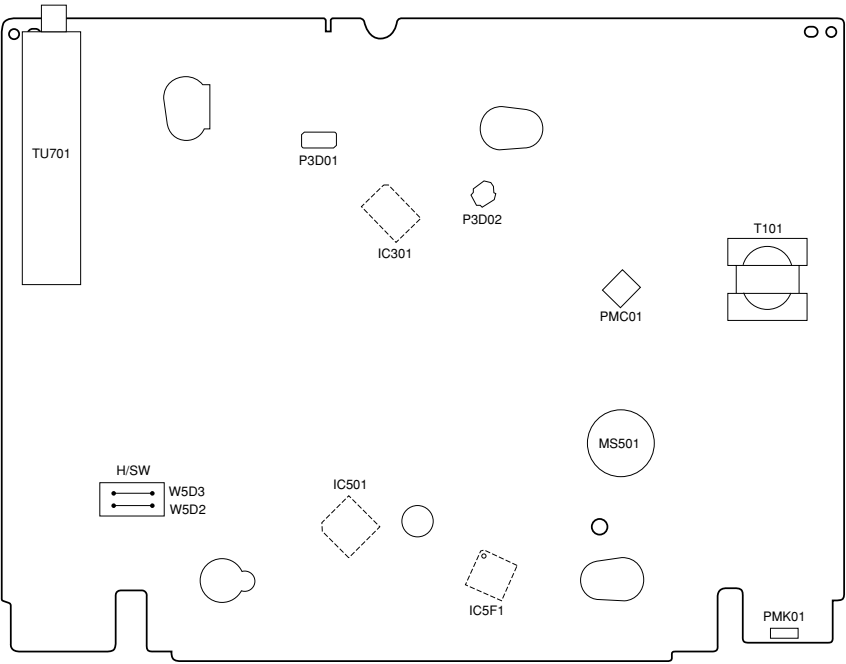
ADJUSTMENT

Test Equipment

• Oscilloscope	• Test Tape
• AC Millivolt Meter	TTV-P1

Adjustment Location

MAIN C.B (TOP VIEW)



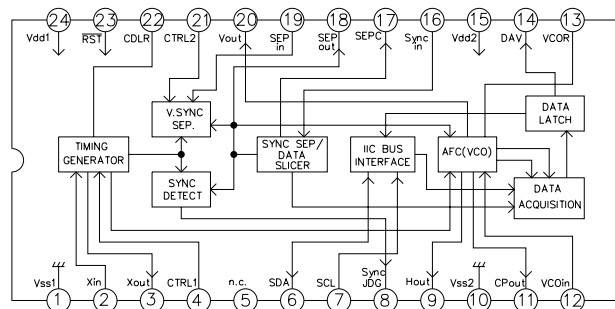
1. Servo Adjustment

1) PG Adjustment

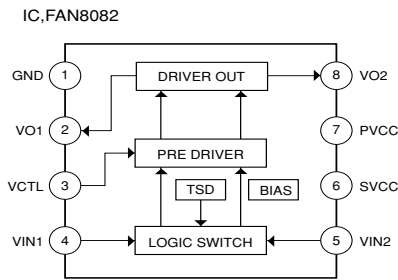
MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY (TTV-P1)	VIDEO OUT H/SW (W5D2, W5D3)	'PLAY' KEY (SET) 'O' KEY (REMOCON)	6.5H ± 0.5H

- Adjustment Procedure
 - Insert the PAL SP Test Tape (TTV-P1) and play.
Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the "ATR" is blink after the PAL SP Test Tape is inserted.
 - Connect the CH1 of the oscilloscope to the H/SW (W5D2, W5D3) and CH2 to the Video Out for the VCR.
 - Trigger the mixed Video Signal of CH2 to the CH1 H.SW (W5D2, W5D3), and then check the distance (time difference), which is from the selected A(B) Head point of the H.SW(W5D2, W5D3) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (416μs, 1H=64.0μs).
- WAVEFORM

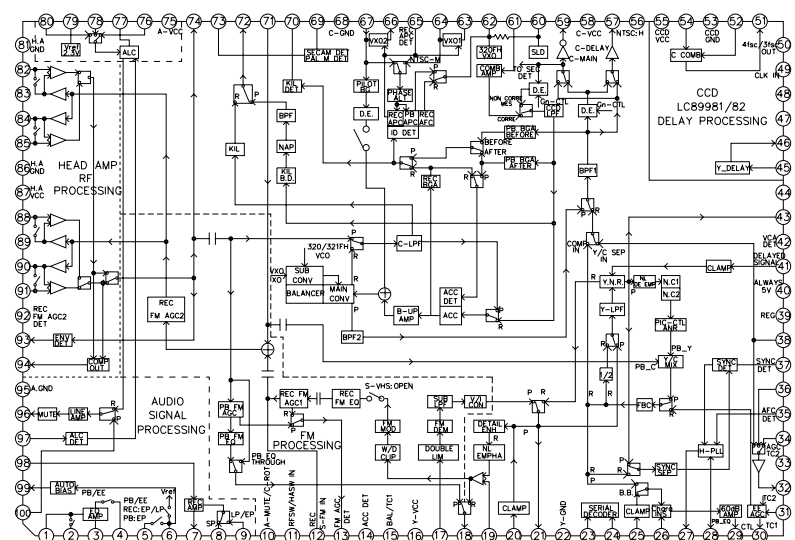
IC, LC74793



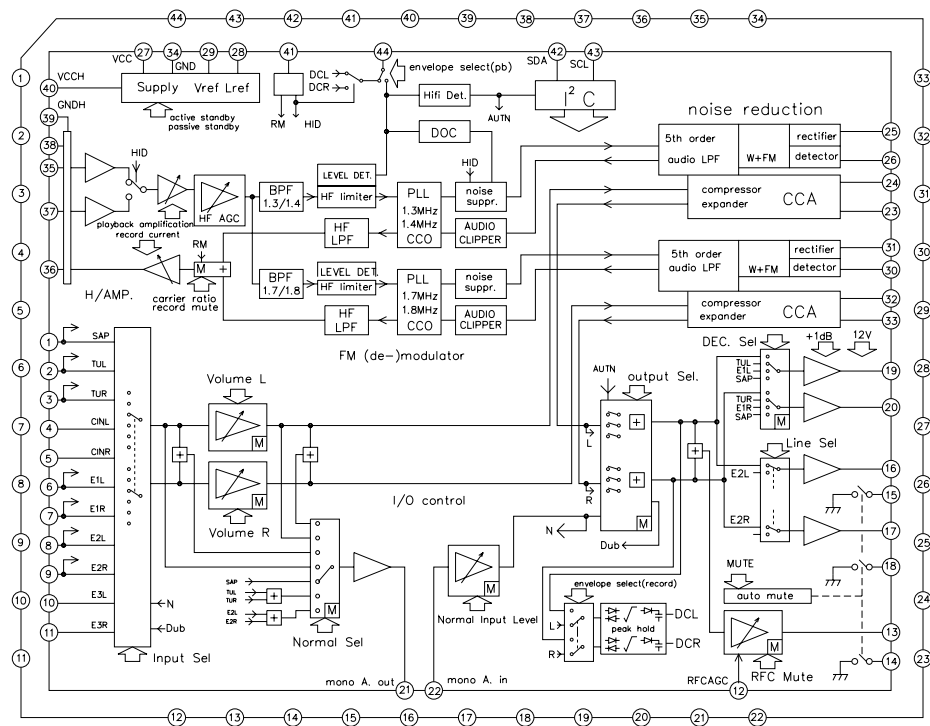
IC, FAN8082



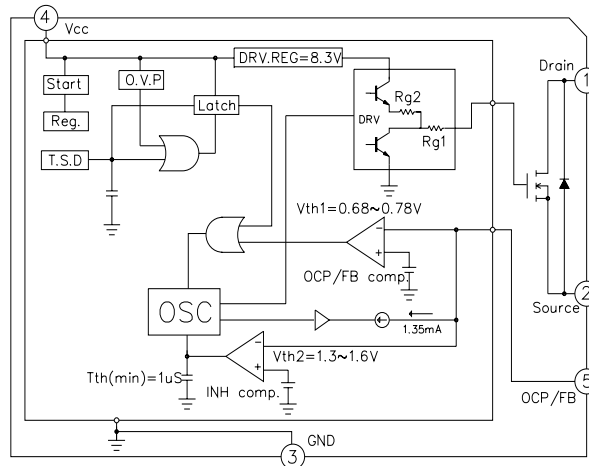
IC, LA71598HM



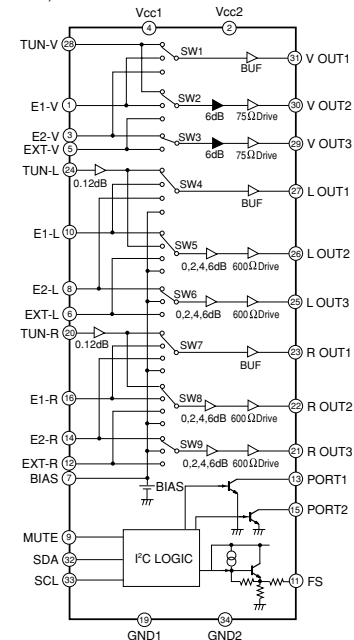
IC, TDA9605H



IC,STR-G6351L



IC, MM1443XJ



IC DESCRIPTION -1/4 (HD6432197A37FX) <HV-FX7800/FX5850> -1/3

Pin No.	Pin Name	I/O	Description
1	SVss	–	Servo Block GND
2	CTLref	O	CTL amp reference
3	CTL(+)	I/O	PB CTL in/REC CTL out (+)
4	CTL(–)	I/O	PB CTL in/REC CTL out (–)
5	CTL BIAS	I	CTL amp bias voltage
6	CTL FB	I	CTL feedback SW control
7	CTL AMP (O)	O	CTL amp output
8	CTL AMP (I)	I	CTL Schmitt amp input
9	CFG	I	CFG input
10	SVcc	–	Servo VCC (+5V)
11	AFCpc	I	SYNC SEPER. 'C' connect
12	AFCosc	I	SYNC SEPER. AFC osc
13	AFCCLPF	I	SYNC SEPER. LPF connect
14	C_SYNC	I	SYNC SEPER. for SERVO
15	VLPF/VSYNC	–	Not connected
16	Cvin2	I	NTSC CAPTION DATA VIDEO
17	Cvin1	I	OSD VIDEO SIGNAL
18	OSD Vcc	–	OSD VCC (+5V)
19	CVout	O	Video signal output
20	OSD_VSS	I	OSD Block GND
21	4FSC OUT	–	SUB-CARRIER OSC.
22	4FSC IN	I	SUB-CARRIER OSC.
23	AVss	–	A/D Block GND
24	V.ENV	I	Video envelope input
25	A.ENV	I	Audio envelope input
26	PG ADJ	I	PG adjustment
27	AFT	I	Tuner AFT in
28	KEY0	I	Key Return 0. Pannel key.
29	KEY1	I	Key Return 1. Pannel key.
30	CST SW	I	CST/SW REC tab check
31	A. LEVEL (L)	I	Level meter L-ch
32	A. LEVEL (R)	I	Level meter R-ch
33	SECAM DET 'H'	I	SECAM detect 'H' (SECAM signal check)
34	C+ DETECT	I	C+ detect/av 2 state del.
35	N.C	–	Not connected
36	A/D Vcc	–	A/D Block VCC 5 V
37	P.FAIL	I	Power failure detect
38	PWR KEY	I	2 W wake up power key
39	CSYNC_IN	I	SYNC detect for CH tuning
40	A.MUTE 'H'	O	Audio mute 'H'
41	S2V.IN 'H'	O	Check canal in 2 W
42	SE/MESECAM 'H'	O	OSD control in SECAM/MESECAM

IC DESCRIPTION -1/4 (HD6432197A37FX) <HV-FX7800/FX5850> -2/3

Pin No.	Pin Name	I/O	Description
43	R/C IN	I	Remote data input
44	CT DETECT	I	C + detect
45	NC	–	Not connected
46	NC	–	Not connected
47	REC 'H'	O	High out at REC mode
48	OTPB 'H'	O	OTPB 'H'
49	T/UP REEL	I	Take-up reel pulse in
50	CAP. REV 'H'	O	CAP reverse 'H'
51	TOP SENSOR	I	Tape reader check at top
52	NC	–	Not connected
53	NC	–	Not connected
54	NC	–	Not connected
55	NC	–	Not connected
56	MAIN VCC	–	Micom +5 V VCC
57	MAIN VSS	–	Micom GND
58	HSR 'H'	O	High speed rewind 'H'
59	IIC CLK	O	IIC bus clock line
60	IIC DATA	I/O	IIC bus data line
61	TIMER 'H'	O	6 W mode power SW
62	P. CTL 'H'	O	High during power on
63	FLD CLK	O	FLD interface clock out
64	FLD DATA OUT	O	FLD interface data out
65	FLD DATA IN	I	FLD interface data in
66	FLD ENA	O	FLD control enable 'H'
67	STAND BY 'H'	O	2W mode power switching
68	MODE SW 4	I	Mode switch data 4
69	MODE SW 3	I	Mode switch data 3
70	MODE SW 2	I	Mode switch data 2
71	MODE SW 1	I	Mode switch data 1
72	LD (–)	O	Loading motor drive (–)
73	LD (+)	O	Loading motor drive (+)
74	FWE	–	Flash write made control pin (Not used in mask)
75	X2 (32.768kHz/OUT)	O	32.768 kHz cristal out
76	X1 (32.768kHz/IN)	I	32.768 kHz cristal in
77	RES	I	Micom reset pin ('L' active)
78	OSC1 (IN)	I	10 MHz in
79	Vss	–	SYSCON GND
80	OSC2 (OUT)	O	10 MHz out
81	VCL	I	Connect 'C' to VSS
82	MDO	I	Mandatory 'high' connect
83	D. ADJ	O	Drum control at slow

Pin No.	Pin Name	I/O	Description
84	CAP ACCEL	O	Capstan control at slow
85	I-LIMIT	O	Capstan current control
86	S. MONITOR2	–	Not connected
87	S. MONITOR1	–	Not connected
88	NC	–	Not connected
89	NC	–	Not connected
90	NC	–	Not connected
91	NC	–	Not connected
92	SUP. REEL	I	Supply reel pulse in
93	TU. SEC VL 'H'	O	High out at SECAM VHF-L
94	TU. SEC 'H'	O	High out at tuner SECAM
95	END SENSOR	I	Tape leader check at end
96	LP REC MUTE 'H'	O	Hi-Fi audio is muted during LP recording
97	16:9 'H'	O	TV wide screen
98	SCART 'H'	O	TV AUTO line
99	C. ROT	O	Color rotary switching
100	H. AMP SW	O	Head amp SW output
101	COMP IN	I	Comparator input
102	NC	–	Not connected
103	DPG	I	DPG input
104	DFG	I	DFG input
105	V.H/SW	O	Video head SW
106	A.H/SW	O	Audio head SW
107	DRUM PWM	O	Drum ctl voltage
108	CAP.PWM	O	Capstan ctl voltage
109	V PULSE	O	Dummy V-SYNC
110	VSS	–	Micom GND
111	C.SYNC IN	I	Composite video in
112	VCC	–	Micom VCC (+5 V)

IC DESCRIPTION -2/4 (HD6432197A37FX) <HV-GX1700/GX1400/GX1100> -1/3

Pin No.	Pin Name	I/O	Description
1	SVss	–	Servo Block GND
2	CTLref	O	CTL amp. reference
3	CTL (+)	I/O	PB CTL in/REC CTL out (+)
4	CTL (–)	I/O	PB CTL in/REC CTL out (–)
5	CTL BIAS	I	CTL amp bias voltage
6	CTL FB	I	CTL feedback SW control
7	CTL AMP (O)	O	CTL amp output
8	CTL SMT (I)	I	CTL Schmitt amp input
9	CFG	I	CFG input
10	SVcc	–	Servo Vcc (+5V)
11	AFCpc	I	SYNC SEPER.'C'connect
12	AFCosc	I	SYNC SEPER.AFC osc
13	AFCCLPF	I	SYNC SEPER.LPF connect
14	C_SYNC	I	SYNC SEPER.for servo
15	VLPF/VSYNC	–	Not connected
16	Cvin2	I	NTSC CAPTION DATA VIDEO
17	Cvin1	I	OSD VIDEO SIGNAL
18	OSD Vcc	–	OSD Vcc (+5V)
19	CVout	O	Video signal output
20	OSD_VSS	–	OSD GND
21	4FscOUT	O	SUB-CARRIER osc
22	4FscIN	I	SUB-CARRIER osc
23	AVss	–	A/D Block GND
24	V.ENV	I	Video envelope input
25	A.ENV	I	Audio envelope input
26	PG ADJ	I	For PG delay adjustment
27	AFT	I	Tuner AFT input
28	KEY0	I	Key Return 0
29	KEY1	I	Key Return 1
30	CST SW	I	CST SW/REC TAB Check
31	A. LEVEL (L)	I	Audio (L) input to drive level meter
32	A. LEVEL (R)	I	Audio (R) input to drive level meter
33	SECAM DET 'H'	I	SECAM detect "H"
34	C+ DETECT	I	C+ detect/av2 state det.
35	N.C	–	Not connected
36	A/D Vcc	–	A/D Block Vcc 5V
37	P.FAIL	I	Power failure detect
38	PWR KEY	I	2W WAKE UP POWER KEY
39	CSYNC_IN	I	SYNC detect for ch tuning
40	A.MUTE 'H'	O	AUDIO MUTE 'H'
41	S2V.IN 'H'	–	Check canal in2W (Not connected)

IC DESCRIPTION -2/4 (HD6432197A37FX) <HV-GX1700/GX1400/GX1100> -2/3

Pin No.	Pin Name	I/O	Description
42	SE/MESECAM 'H'	O	Osd control in secam/mesecam
43	R/C IN	I	Remote data input
44	C + DETECT	I	C + detect
45	N.C	–	Not connected
46	VCR 'H'	–	Not connected
47	REC 'H'	O	High out at rec mode
48	OTPB	O	OTPB "H"
49	T/UP REEL	I	Take-up reel pulse input
50	CAP. REV 'H'	O	CAP reverse "H"
51	TOP SENSOR	I	Tape leader check at top
52	PWR CTL "H"	O	Power control
53	SCART "H"	O	TV/VCR mode control in scart model
54	TUN.SEC.VL"H"	O	Secam VHF L band "H"
55	TUN.SEC."H"	–	Tuner secam signal det."H"(Not connected)
56	MAIN VCC	–	Micom power supply
57	MAIN VSS	–	Micom GND
58	HSR 'H'	–	High speed rewind "H"(Not connected)
59	IIC CLK	O	IIC bus clock line
60	IIC DATA	I/O	IIC bus data line
61	TIMER 'H'	O	6w mode power sw
62	GRID 5	O	Grid 5 control
63	GRID 4	O	Grid 4 control
64	GRID 3	O	Grid 3 control
65	GRID 2	O	Grid 2 control
66	GRID 1	O	Grid 1 control
67	STAND BY 'H'	O	2W mode power switching
68	MODE SW 4	I	Mode switch data4 input
69	MODE SW 3	I	Mode switch data3 input
70	MODE SW 2	I	Mode switch data2 input
71	MODE SW 1	I	Mode switch data1 input
72	LD (–)	O	Loading motor drive (–)
73	LD (+)	O	Loading motor drive (+)
74	FWE	–	Flash write mode control pin(Not used in mask)
75	X2 (32.768kHz/OUT)	O	32.768 kHz cristal out
76	X1 (32.768kHz/IN)	I	32.768 kHz cristal in
77	RES	I	Micom reset pin ("L" active)
78	OSC1 (IN)	I	For the connection of 10 MHz OSC
79	Vss	–	Micom GND
80	OSC2 (OUT)	O	For the connection of 10 MHz OSC
81	VCL	I	Connect 'C' to Vss
82	MDO	I	Mandatory 'H' connect

IC DESCRIPTION -2/4 (HD6432197A37FX) <HV-GX1700/GX1400/GX1100> -3/3

Pin No.	Pin Name	I/O	Description
83	D. ADJ	O	Drum control output during slow
84	CAP ACCEL	O	Capstan control at slow
85	I-LIMIT	O	Capstan current control
86	S. MONITOR2	–	Servo monitor 2(Not connected)
87	S. MONITOR1	–	Servo monitor 1(Not connected)
88	SEG 1	O	LED segment "H"
89	SEG 2	O	LED segment "H"
90	SEG 3	O	LED segment "H"
91	SEG 4	O	LED segment "H"
92	SEG 5	O	LED segment "H"
93	SEG 6	O	LED segment "H"
94	SEG 7	O	LED segment "H"
95	SEG 8	O	LED segment "H"
96	SEG 9	O	LED segment "H"
97	16:9 'H'	O	TV wide screen
98	END SENSOR	I	End sensor input
99	C. ROT	O	Color rotary SW signal output
100	H. AMP SW	O	Head amp SW output
101	COMP IN	–	Comparator input(Not connected)
102	SUP.REEL	I	Supply reel pulse input
103	DPG	I	DPG input
104	DFG	I	DFG input
105	V.H/SW	O	V.HD/SW output
106	A.H/SW	–	A.HD/SW output(Not connected)
107	DRUM PWM	O	Drum PWM control
108	CAP.PWM	O	Capstan PWM control
109	DV. SYNC	O	Dummy v-sync
110	VSS	–	Micom GND
111	C.SYNC IN	I	Composite video input
112	VCC	–	Micom Vcc (+5V)

IC DESCRIPTION -3/4 (MSP3417D-QG) -1/1

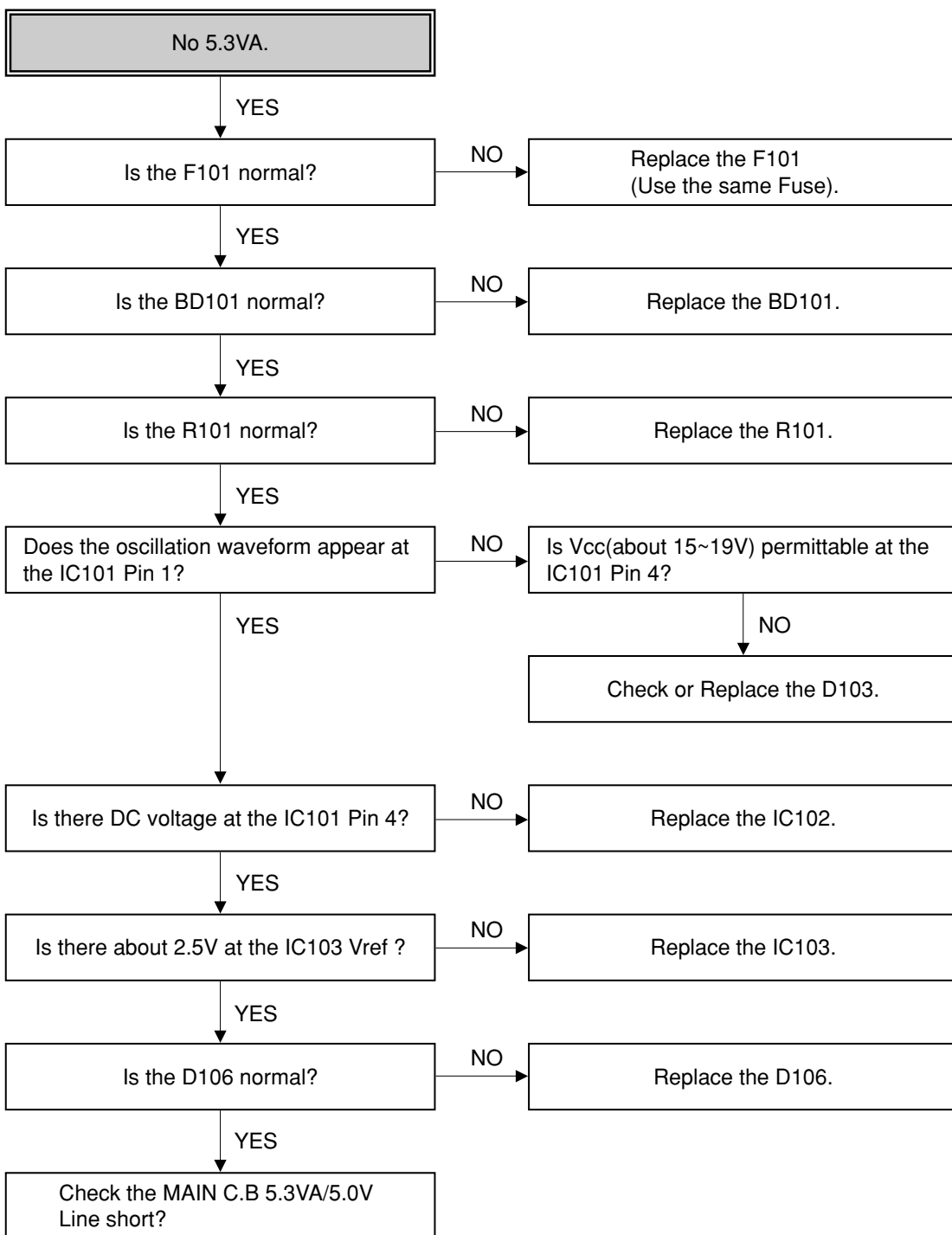
Pin No.	Pin Name	I/O	Description
1	AVSUP	–	Analog power supply +5 V
2	ANA IN+	I	IF input
3	ANA IN-	I	CTL(+) input/output
4	TESTEN	–	Test pin (Not used)
5	XTAL IN	I	Crystal oscillator
6	XTAL OUT	O	Crystal oscillator
7	TP	–	Test pin (Not used)
8	D CTR OUT1	–	Digital control output 1 (Not connected)
9	D CTR OUT0	–	Digital control output 0 (Not connected)
10	ADR SEL	–	I ² C bus address select
11	STANDBYQ	I	Standby (low-active)
12	I ² C CL	I/O	I ² C clock
13	I ² C DA	I/O	I ² C data
14 ~ 18	TP	–	Test pin (Not used)
19	DVSUP	–	Digital power supply +5 V
20	DVSS	–	Digital ground
21	TP	–	Test pin (Not used)
22	RESETQ	–	Power pri reset
23, 24	TP	–	Test pin (Not used)
25	VREF2	–	Reference ground 2 high voltage part
26	DACM R	–	Loudspeaker out, right (Not connected)
27	DACM L	I	Loudspeaker out, left (Not connected)
28	TP	–	Test pin (Not used)
29	VREF1	–	Reference ground 1 high voltage part
30	SC1 OUT R	O	Scart output 1, right
31	SC1 OUT L	O	Scart output 1, left
32	NC	–	Not connected
33	AHVSUP	–	Analog power supply 8.0 V
34	CAPL M	–	Volume capacitor MAIN (Not connected)
35	AHVSS	–	Analog ground
36	AGNDC	–	Analog reference voltage high voltage part
37 ~39	NC	–	Not connected
40	SC1 IN L	–	Scart input 1 in, left (Not connected)
41	SC1 IN R	–	Scart input 1 in, right (Not connected)
42	VREFTOP	–	Reference voltage IF A/D converter
43	MONO IN	I	Mono input
44	AVSS	–	Analog ground

IC DESCRIPTION -4/4 (LC74793) -1/1

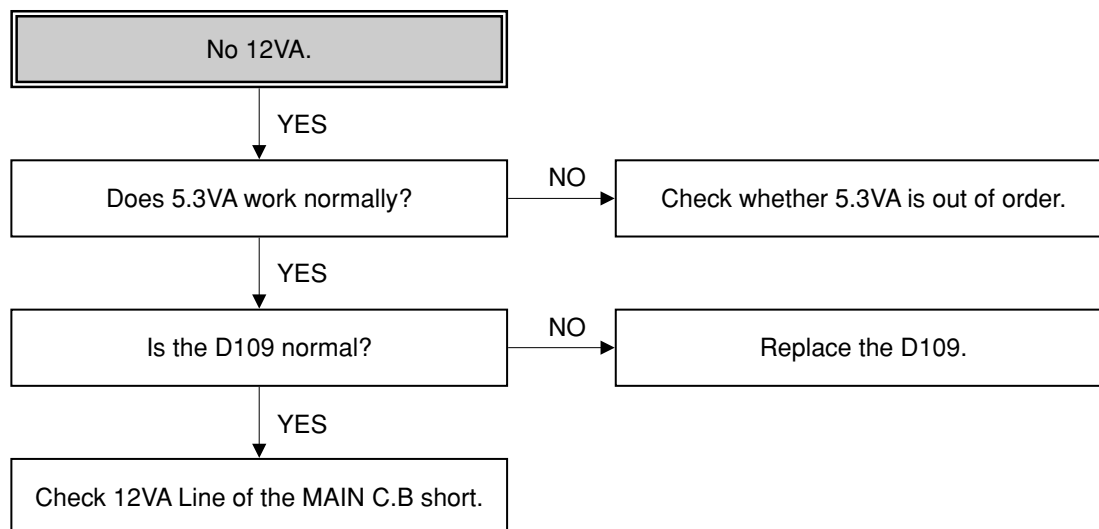
Pin No.	Pin Name	I/O	Description
1	VSS1	–	Connected to ground (ground of digital circuits)
2	XTAL IN	I	For the connection of crystal or capacitors of crystal oscillator, or external clock input
3	XTAL OUT	–	
4	CTRL1	I	L: Crystal oscillator; H: External clock input
5	NC	–	Not connected
6	SDA	I/O	PDC/VPS data input/output pin
7	SCL	I/O	Clock input for PDC/VPS data
8	SYNCJDC	–	Not connected
9	HOUT	–	Horizontal sync output
10	VSS2	–	Ground
11	CPOUT	O	Charge pump output. An LPF is connected.
12	VCOIN	I	Voltage input for VCO control
13	VCOR	–	For the connection of resistors for adjusting VCO oscillation range
14	DAV	–	Outputs 'L' when PDC/VPS data can be detected.
15	VDD2	–	Power supply (+5V VCO)
16	SYNIN	I	Video signal input to internal sync separator
17	SEPC	–	Slice level check pin
18	SEPOUT	–	Outputs composite sync signal from internal sync separator. (Not connected)
19	SEPIN	–	Vertical sync input. Fix to VDD1 when not used.
20	VOUT	–	Vertical sync output. (Not connected)
21	CTRL2	–	SEP input control. L: V.SYNC not input; H: V.SYNC input
22	CDLR	–	For the connection of resistors for adjusting clock phase
23	$\overline{\text{RST}}$	–	Reset input
24	VDD1	–	Power supply (+5V)

1. Power Circuit(SMPS)

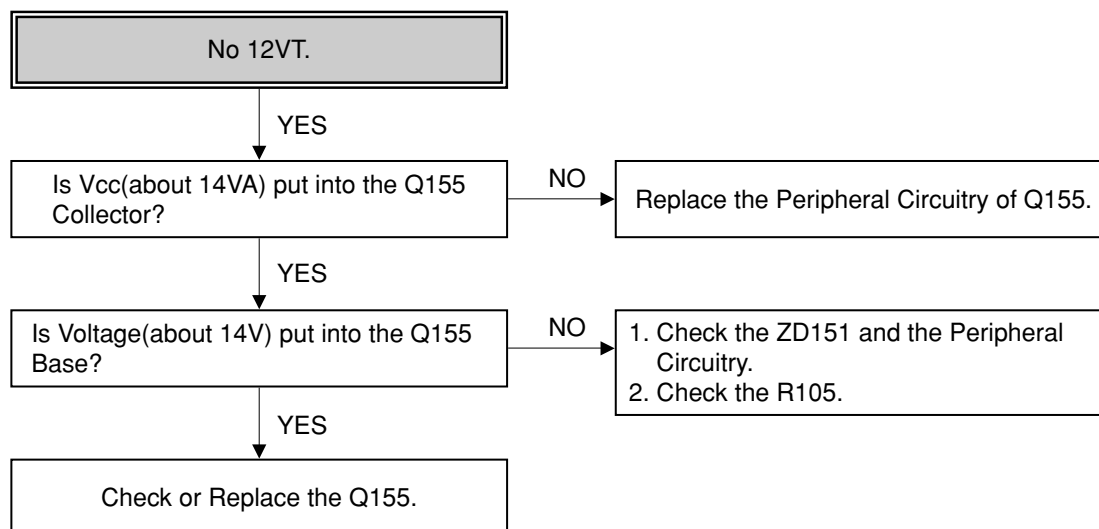
(1) No 5.3VA.

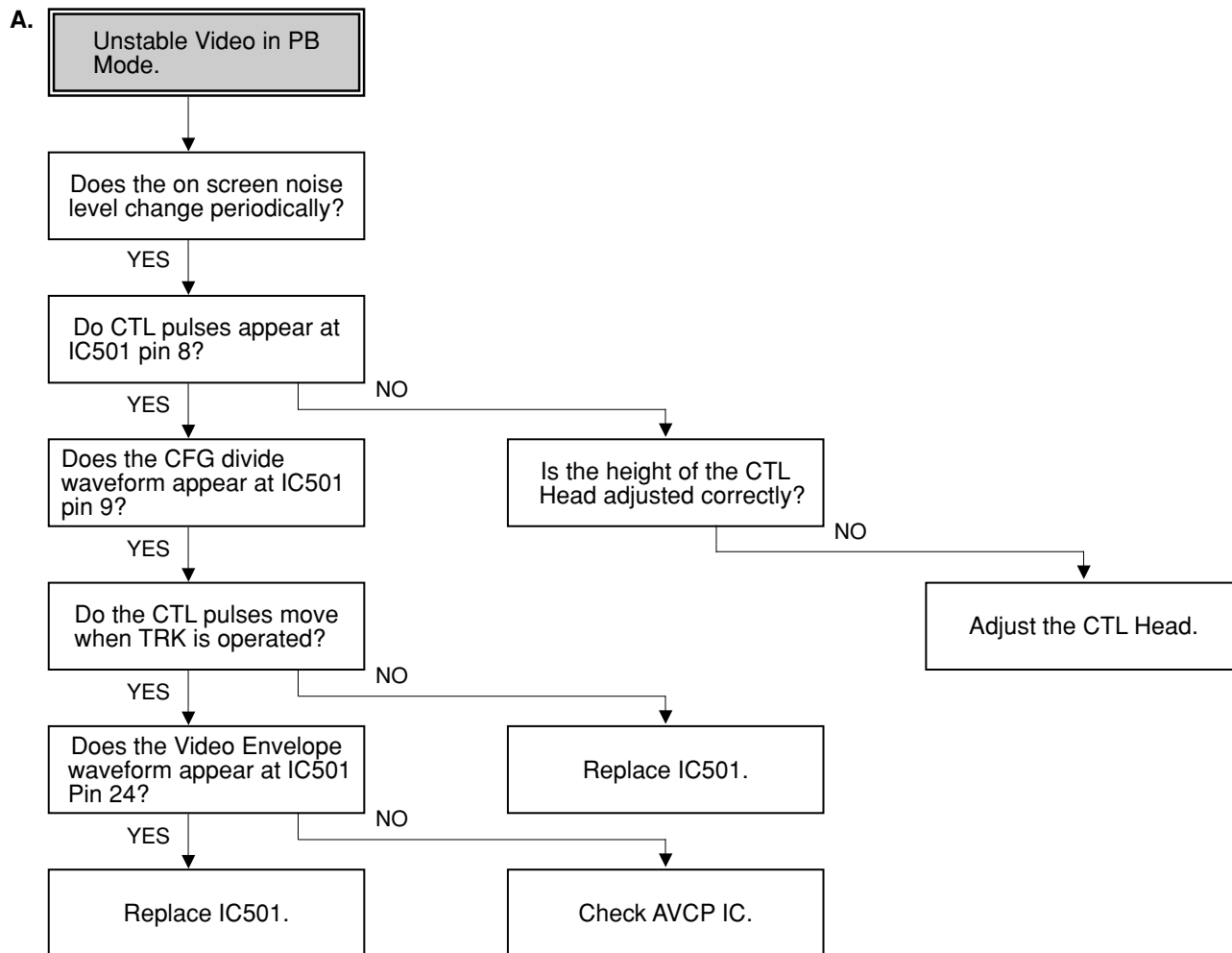


(2) No 12VA.(Capstan)

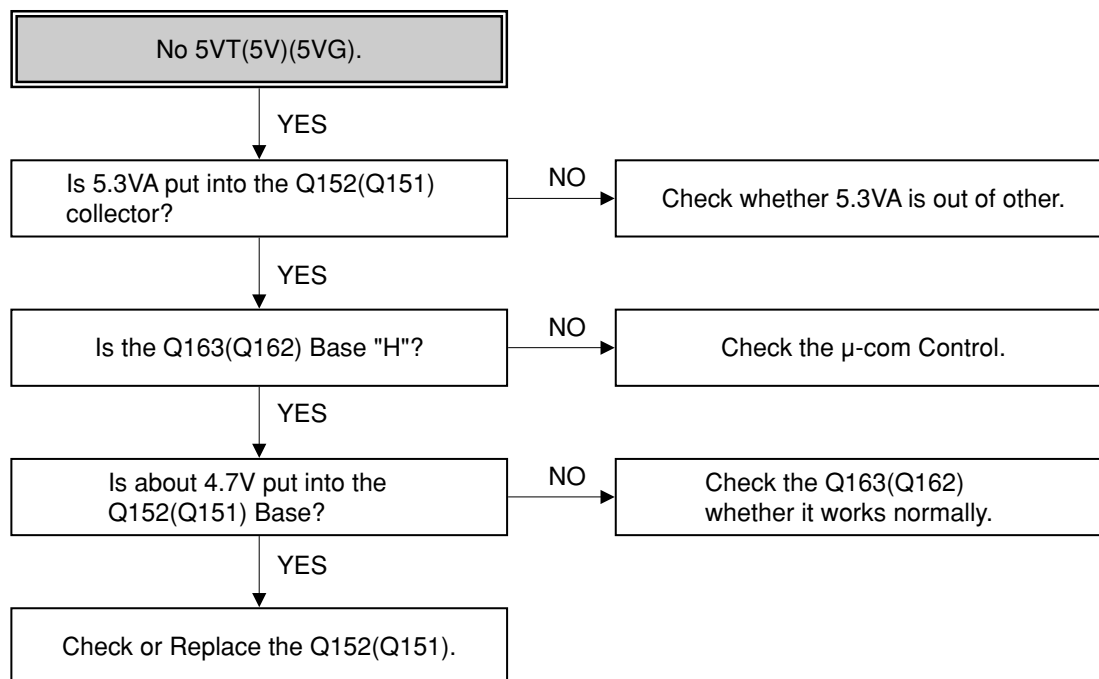


(3) No 12VT (CANAL, Buffer)

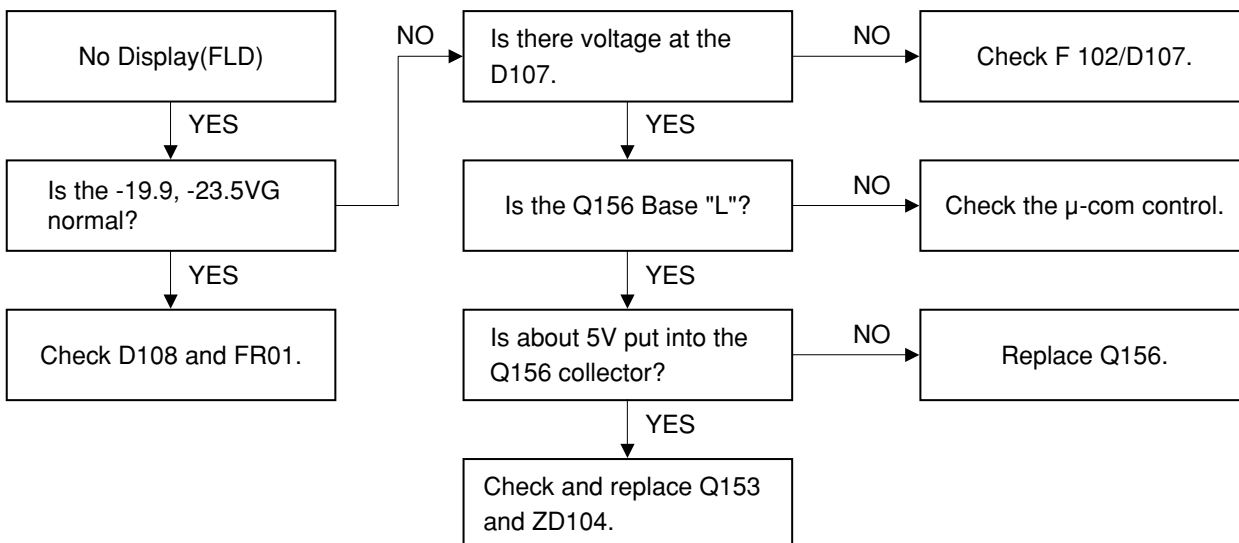


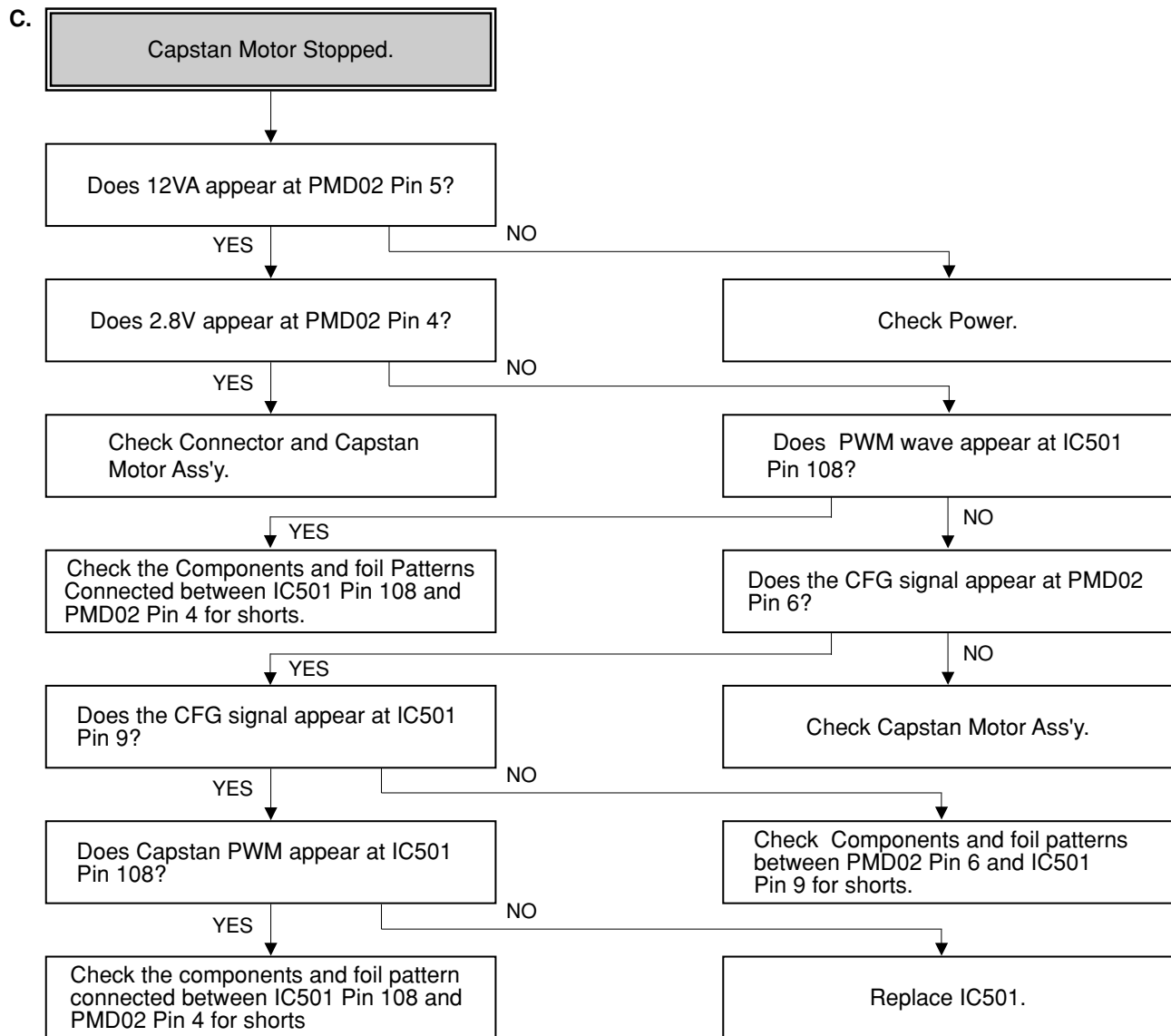
2. Servo Circuit

(4) No 5VT(5V)

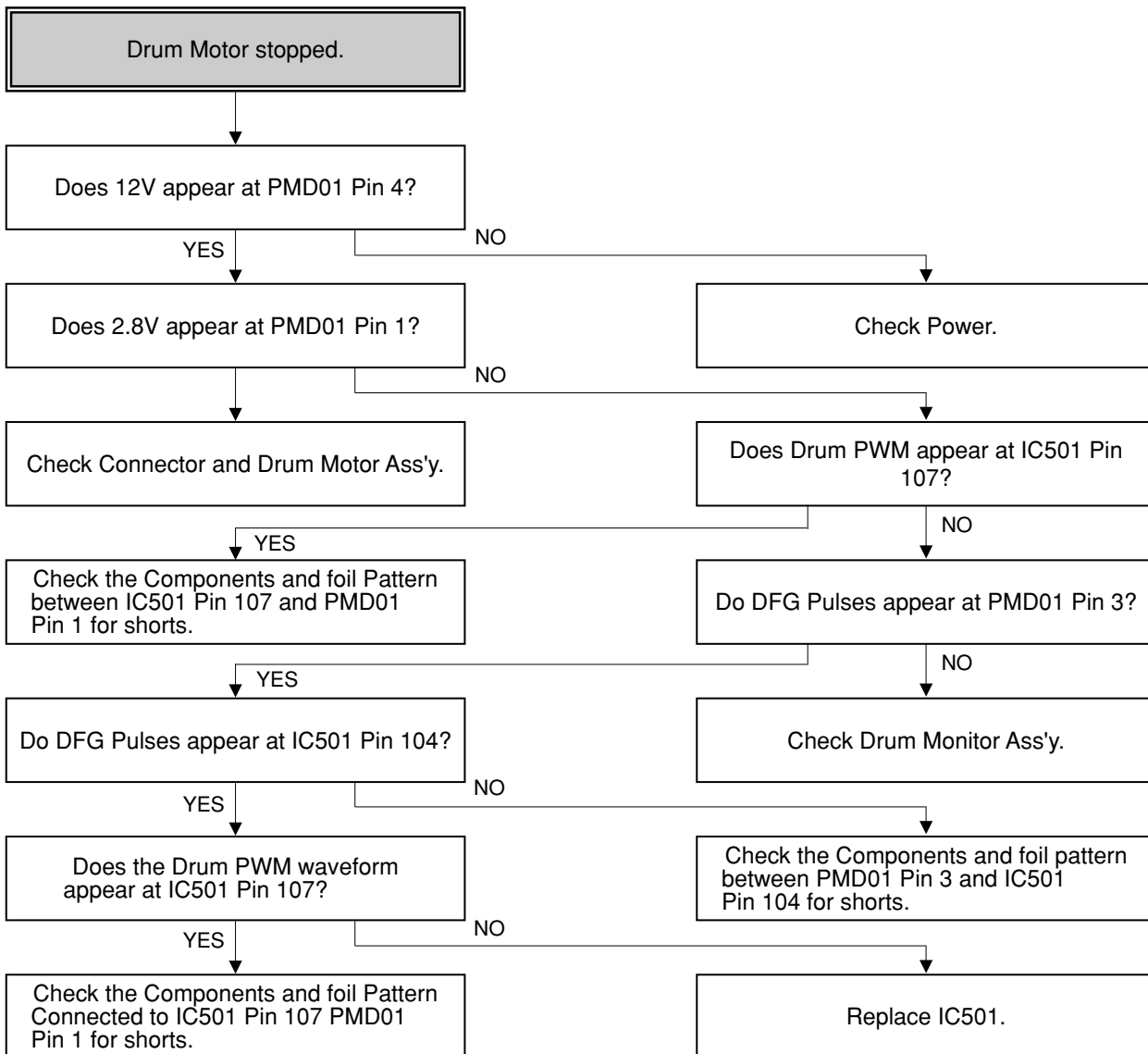


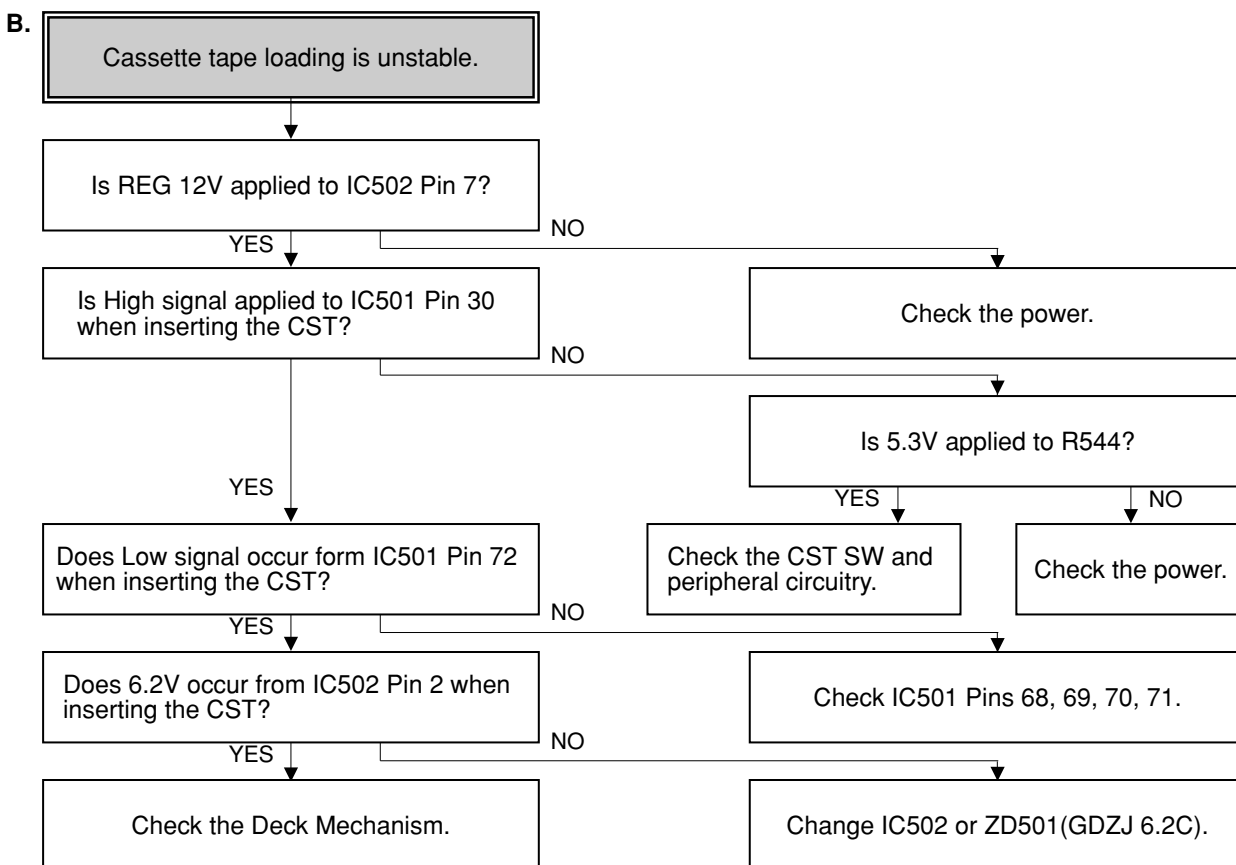
(Hi-Fi Only)



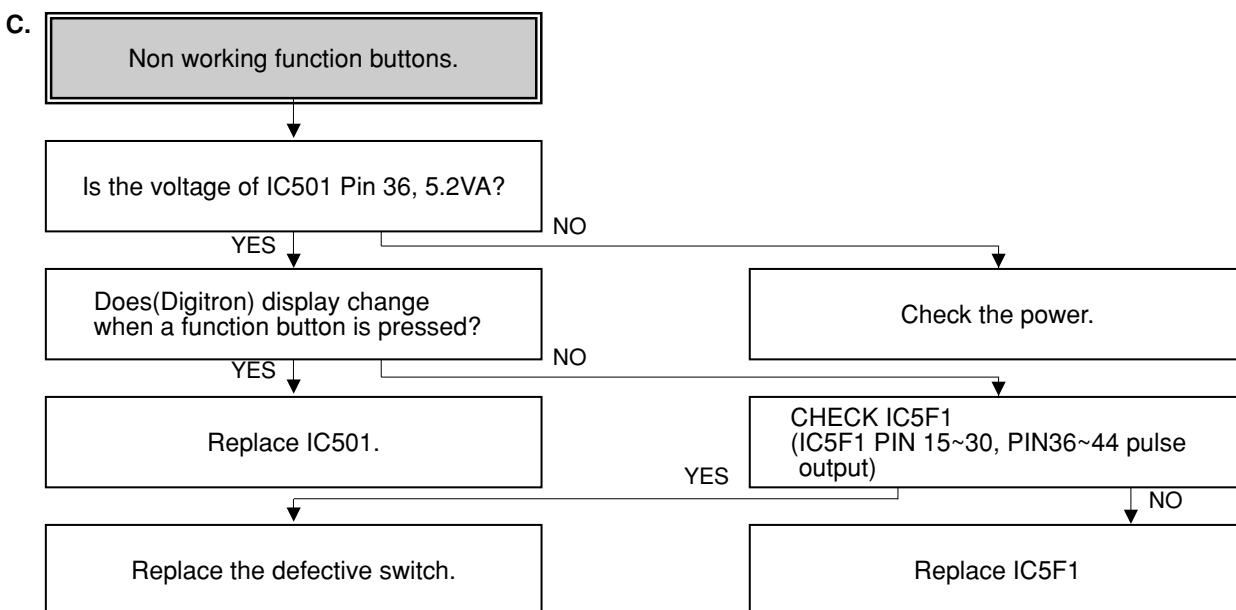


B.

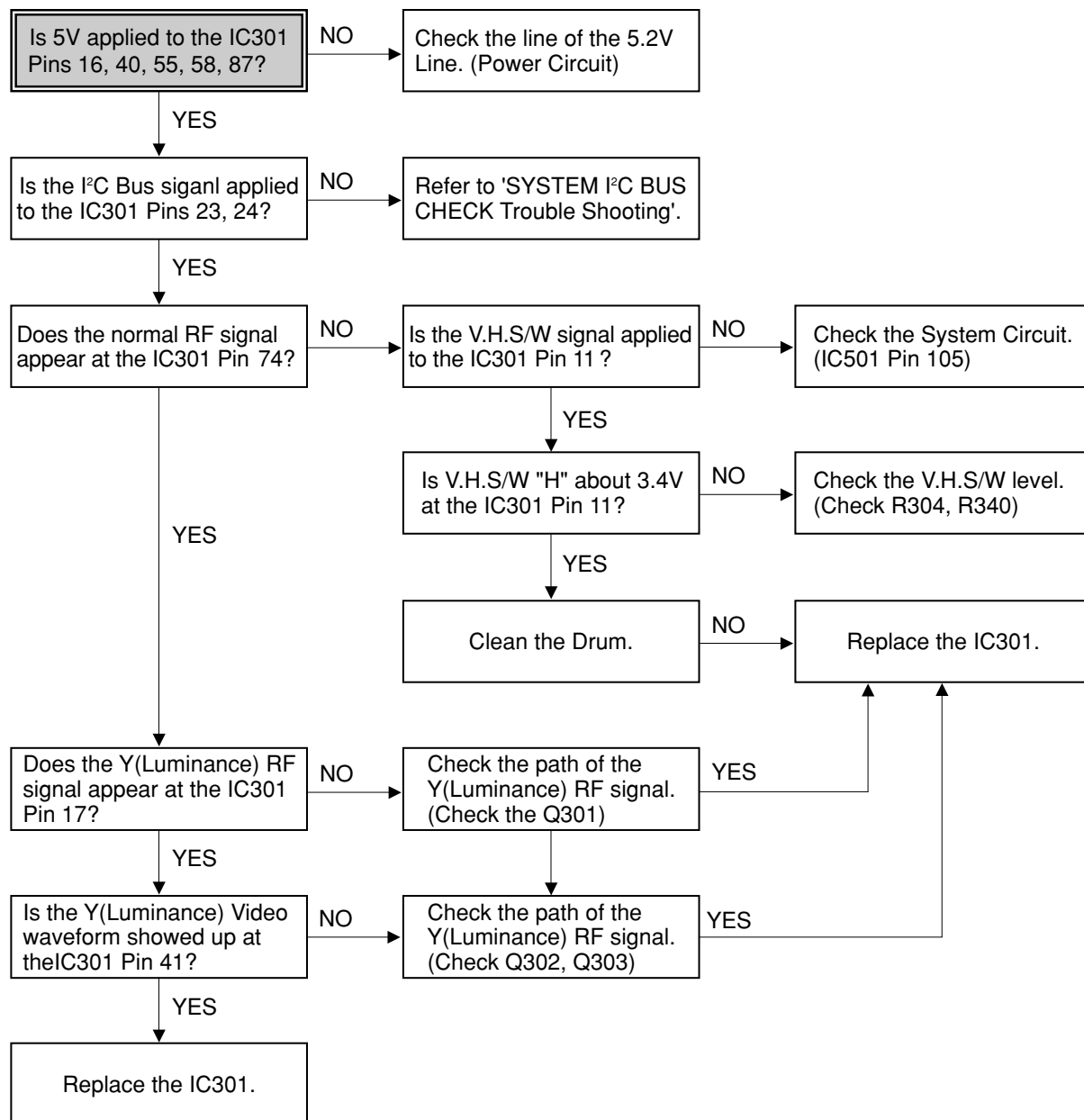


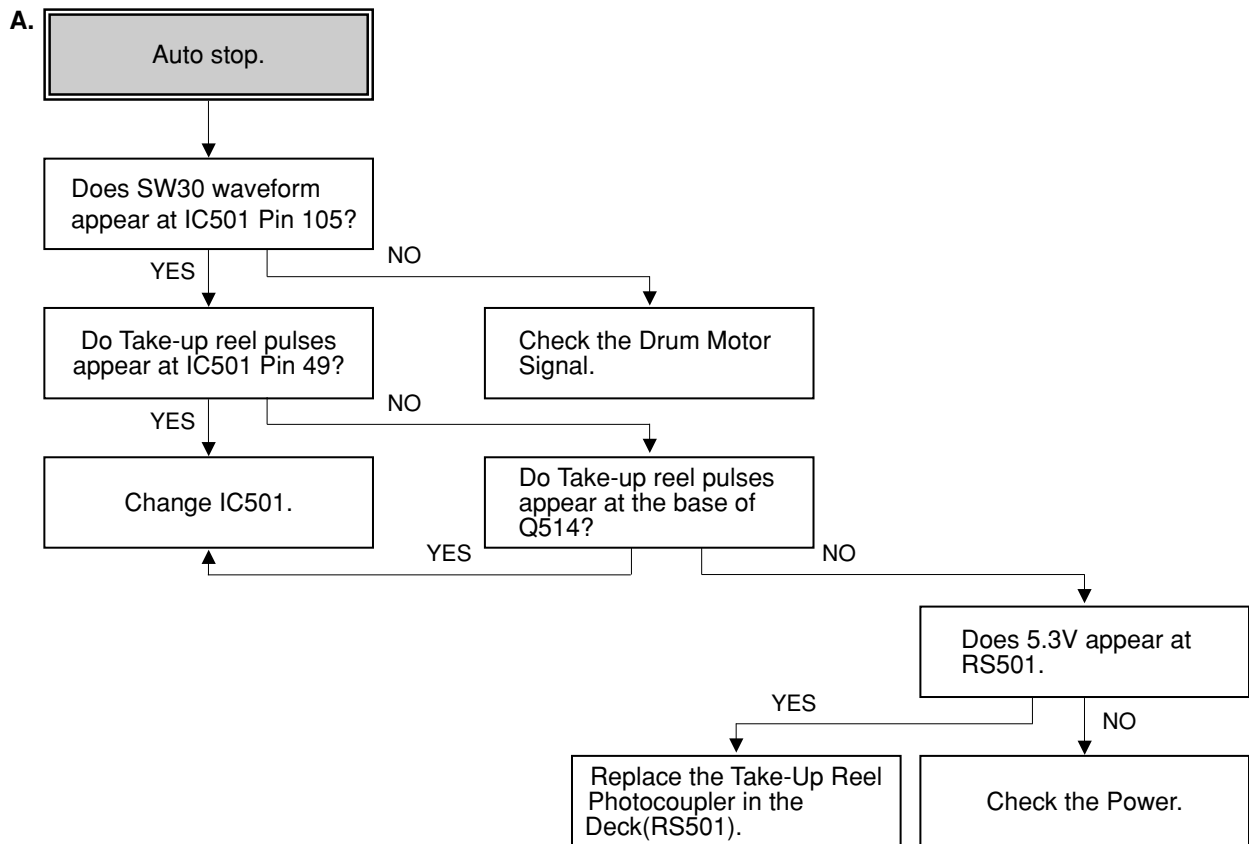


NOTE : Auto stop may also be caused by lack of lubrication, due to dried grease or oil.



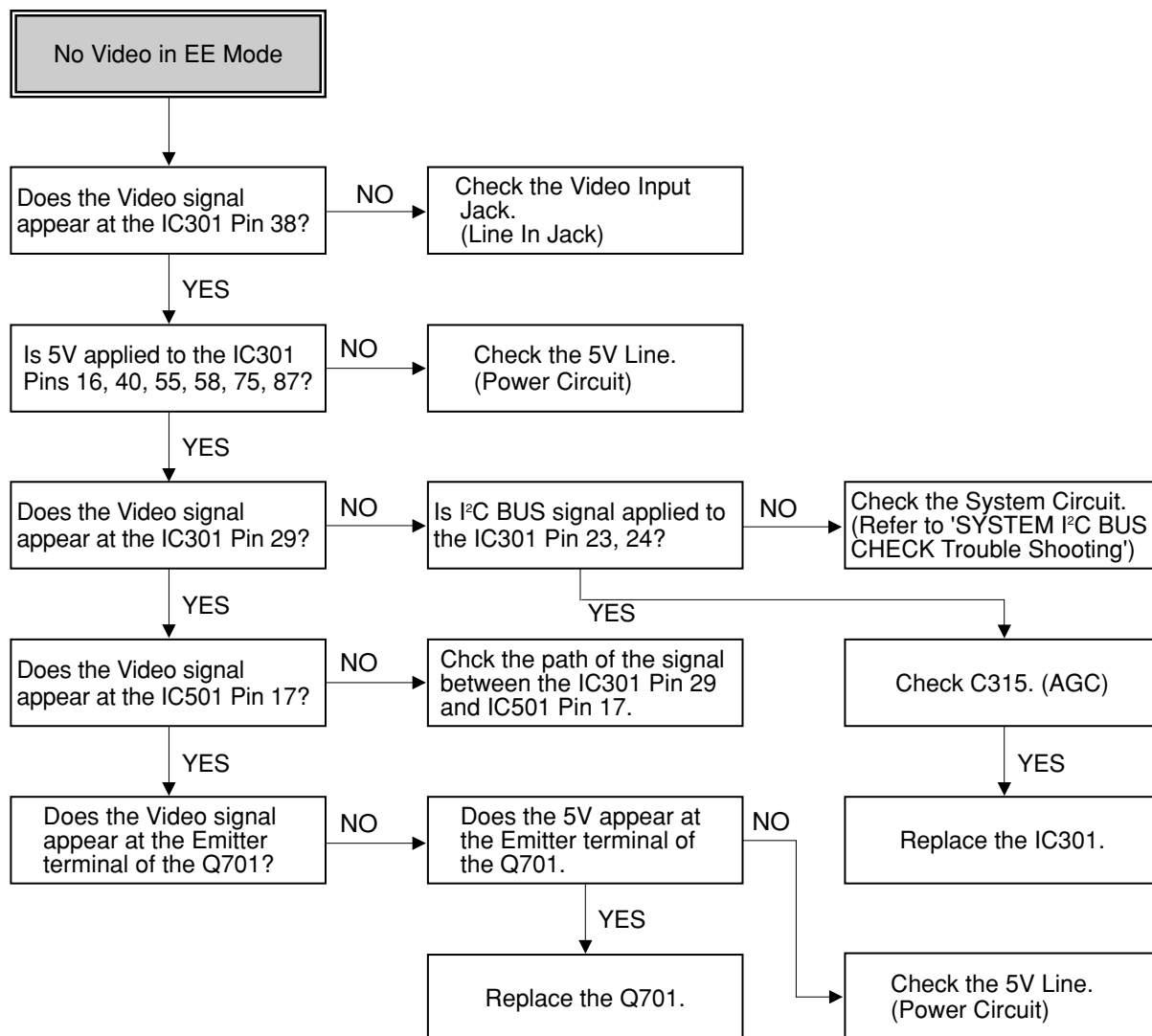
(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,



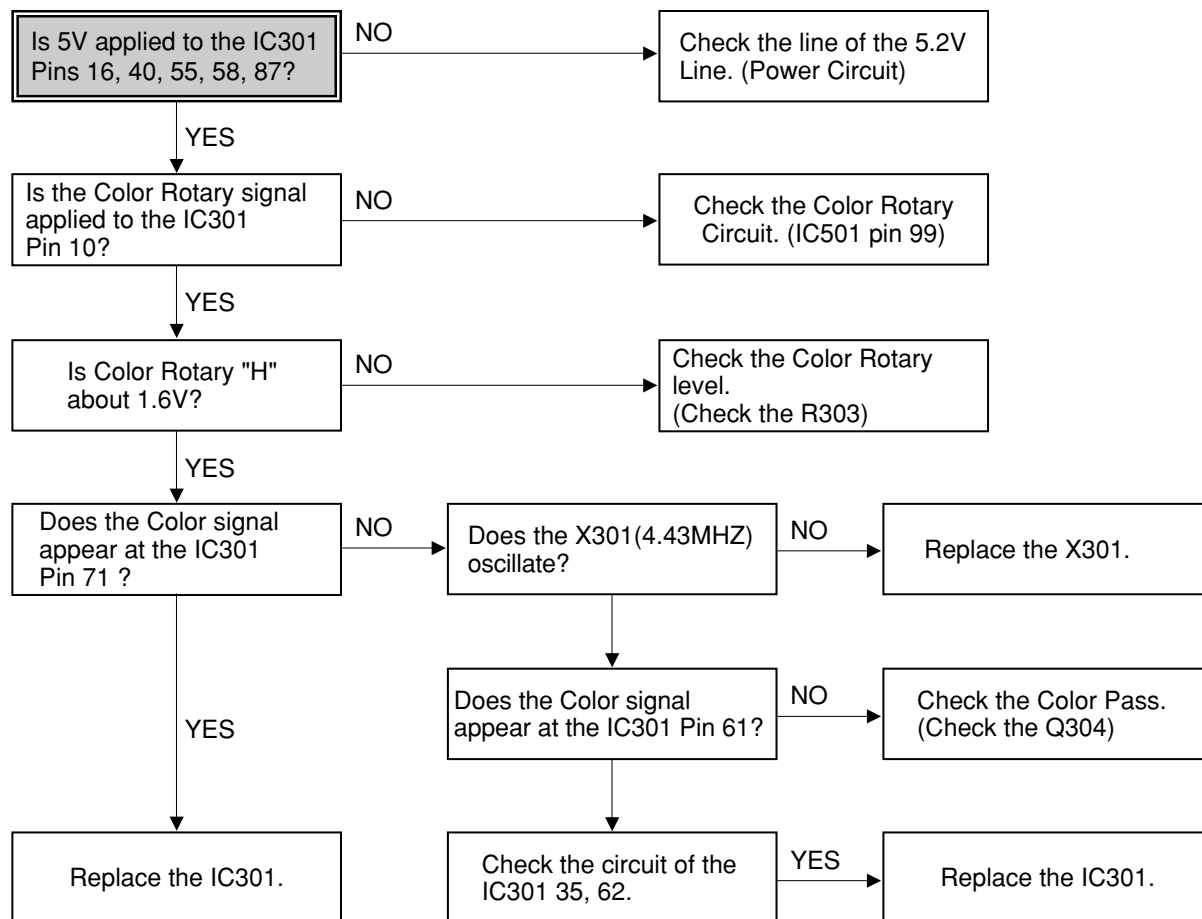
3. System & Front Panel Circuit

4. Y/C CIRCUIT

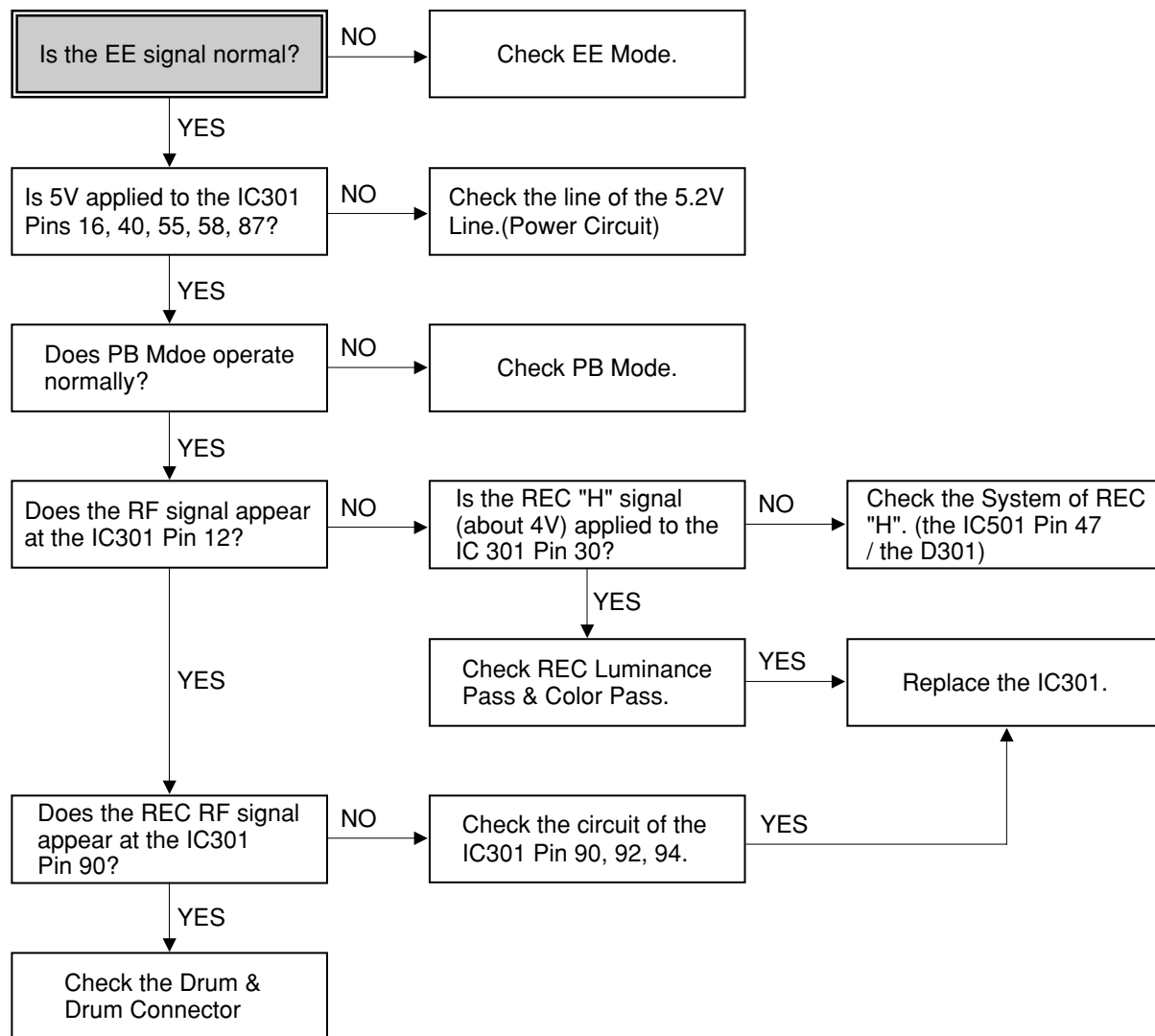
(1) No Video in EE Mode,



(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

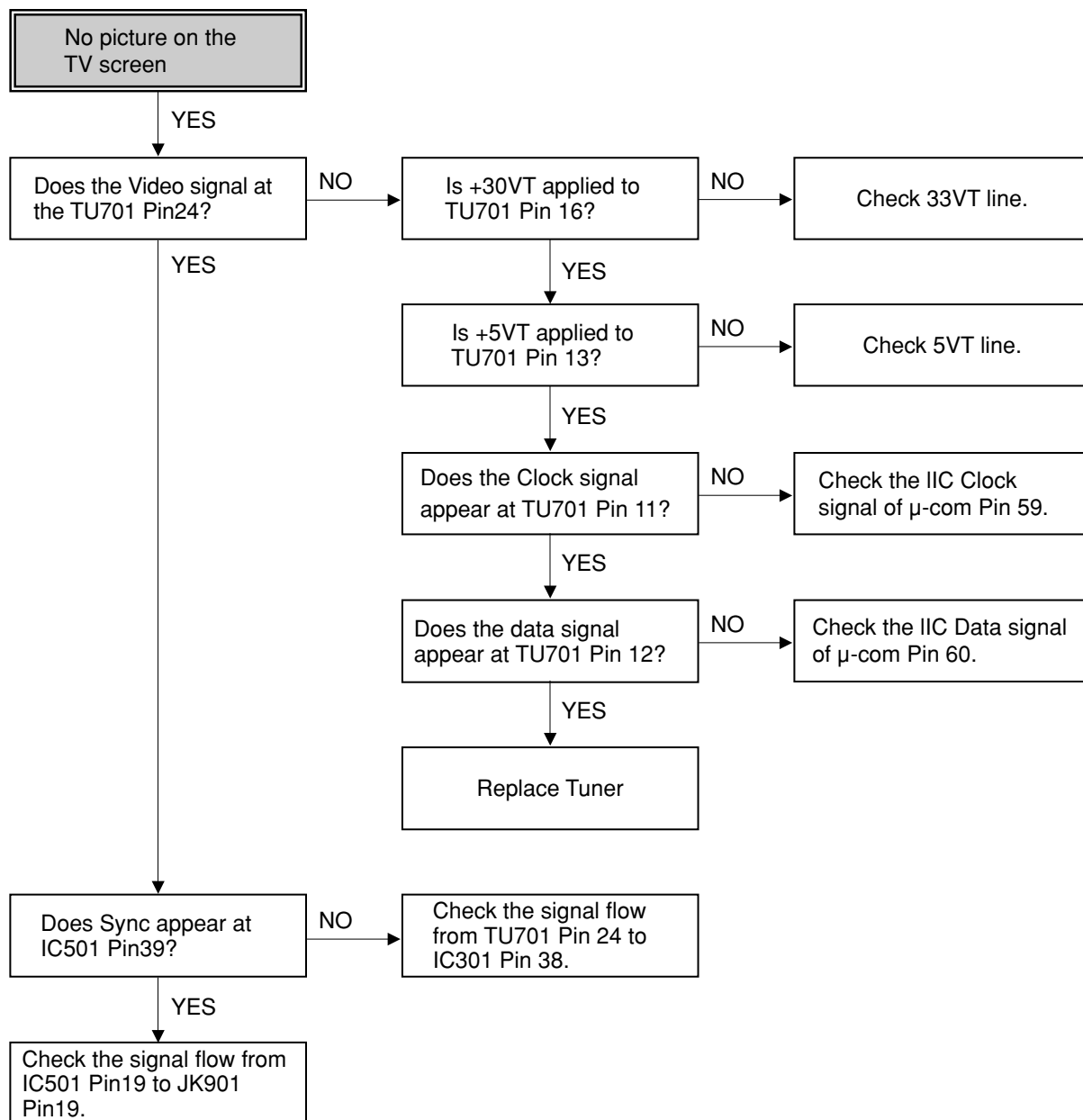


(4) When the Video signal doesn't appear on the screen in REC Mode,

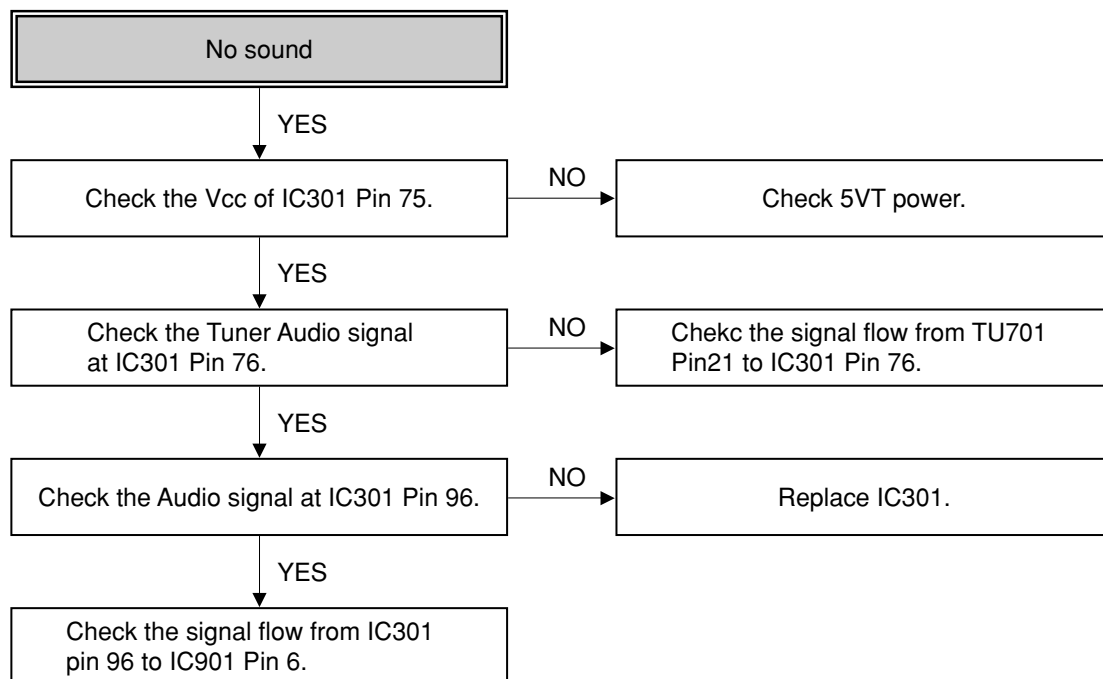


5. Tuner/IF circuit

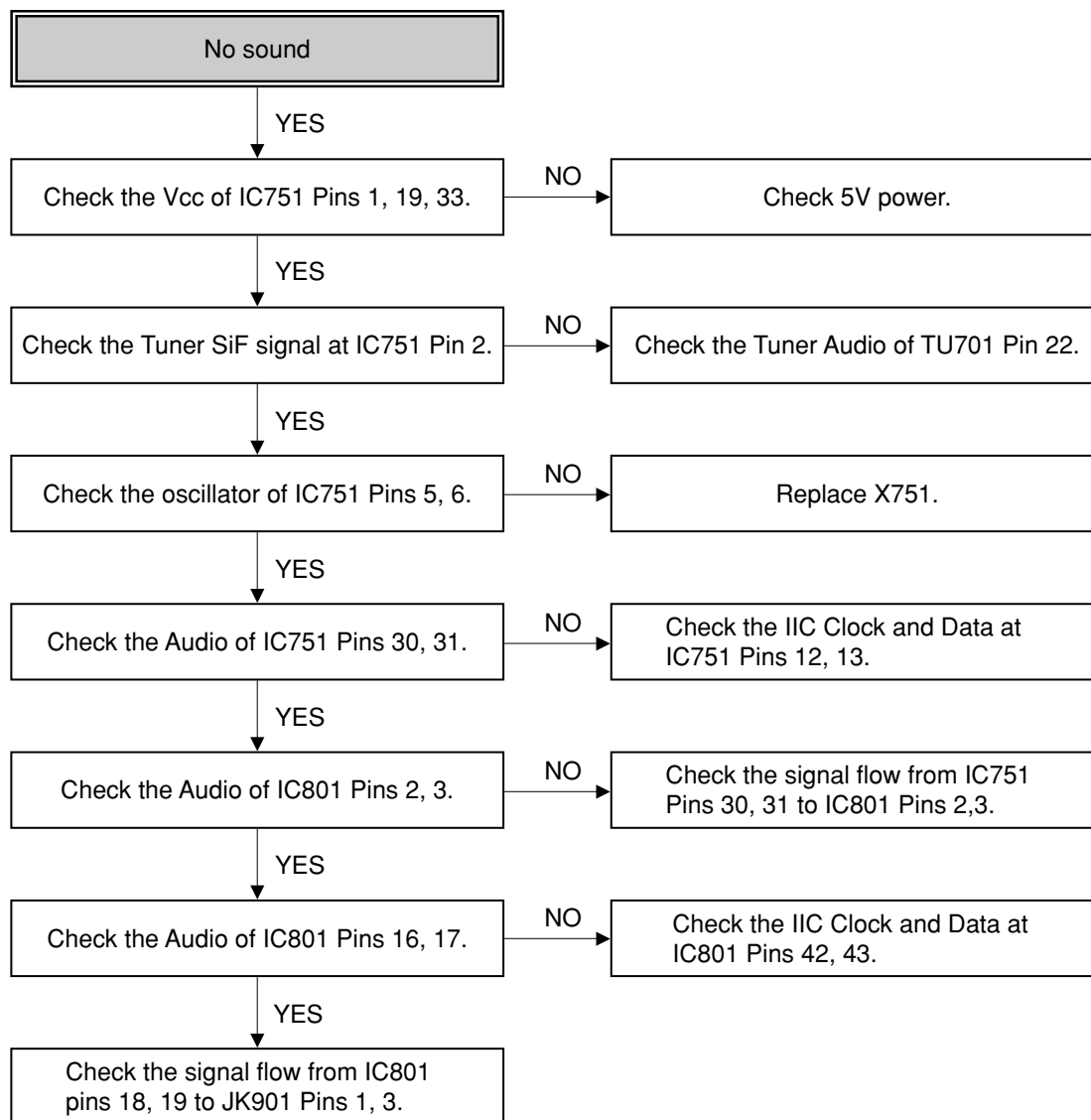
(1) No picture on the TV screen

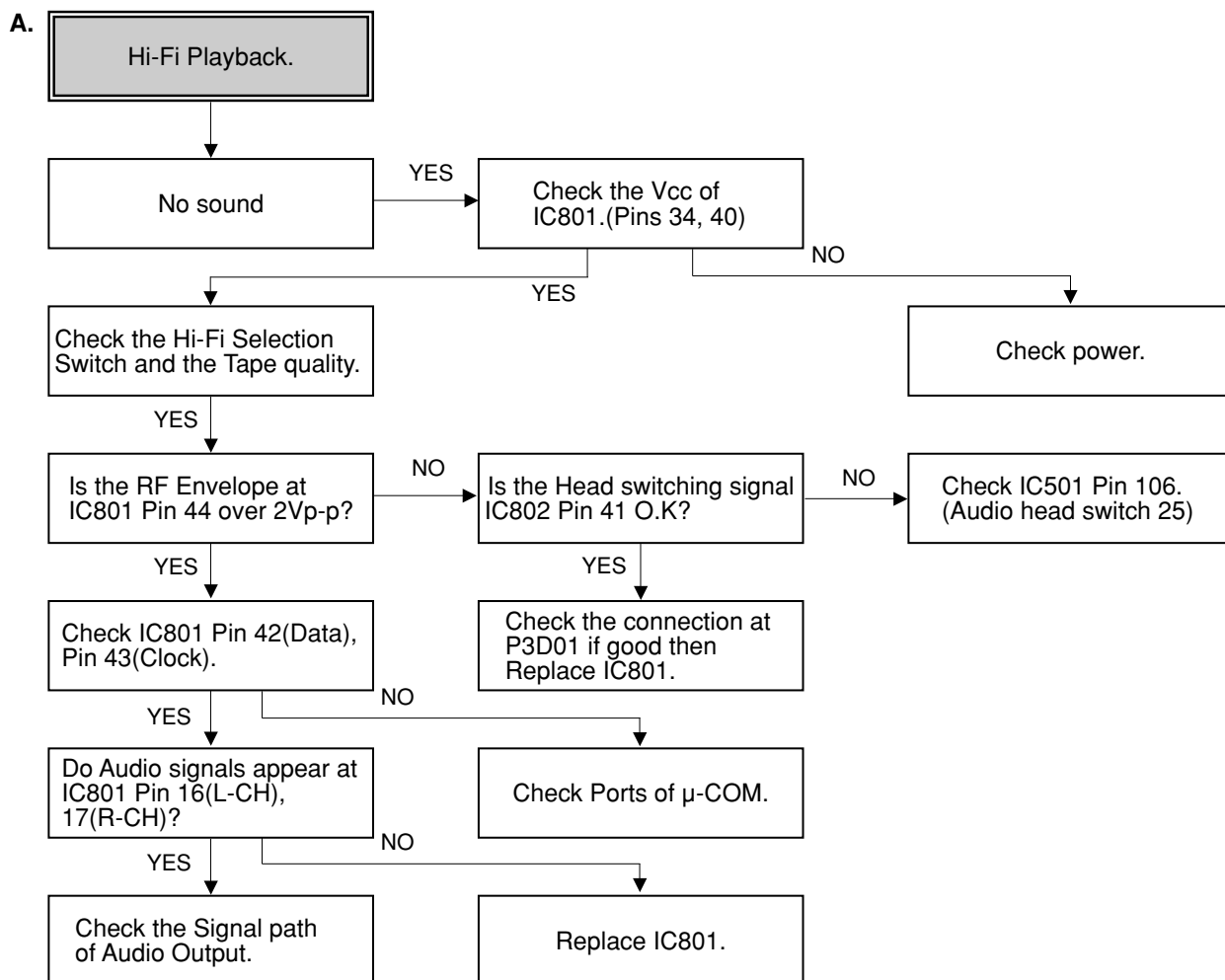


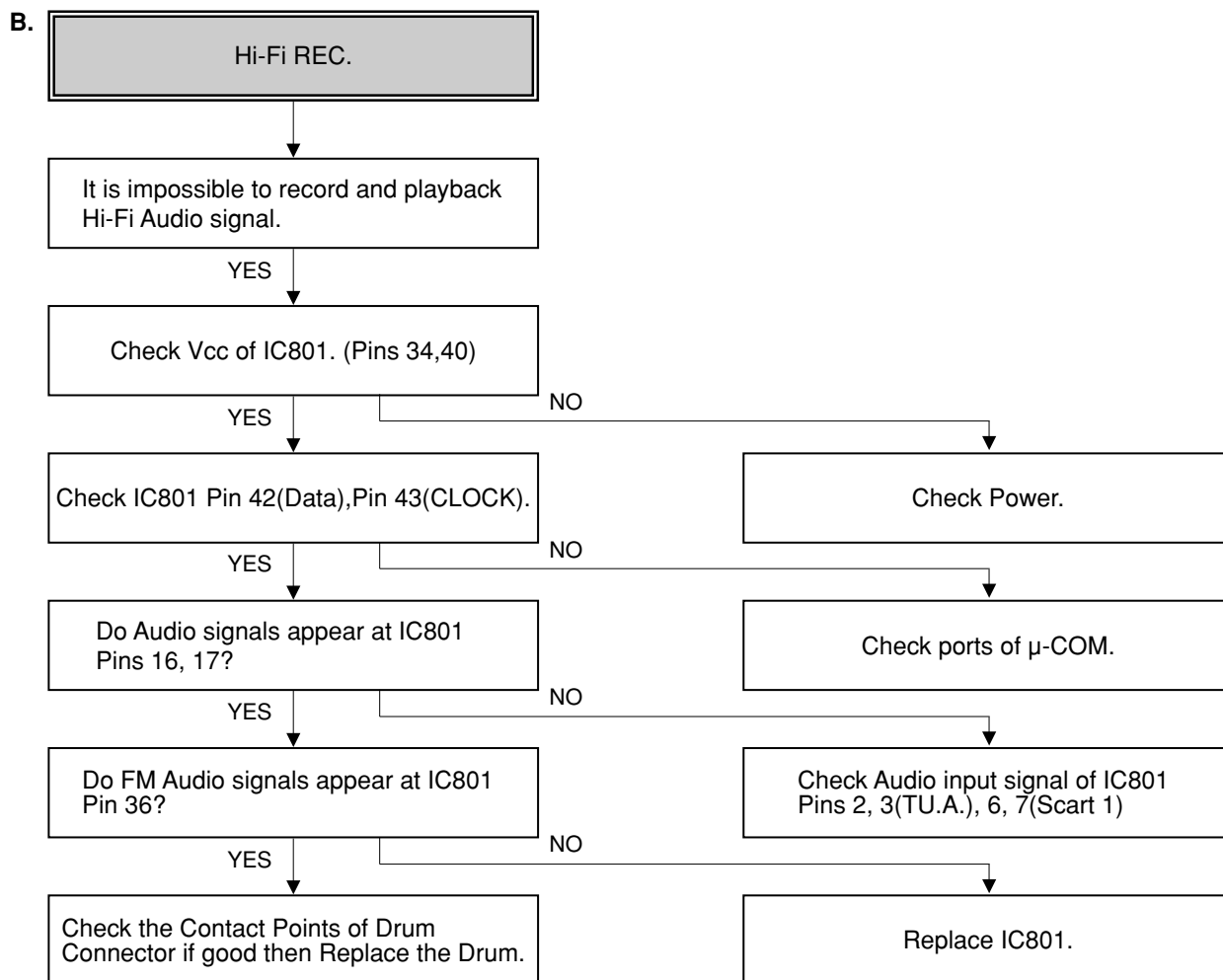
(2) No sound (Mono Model Only)



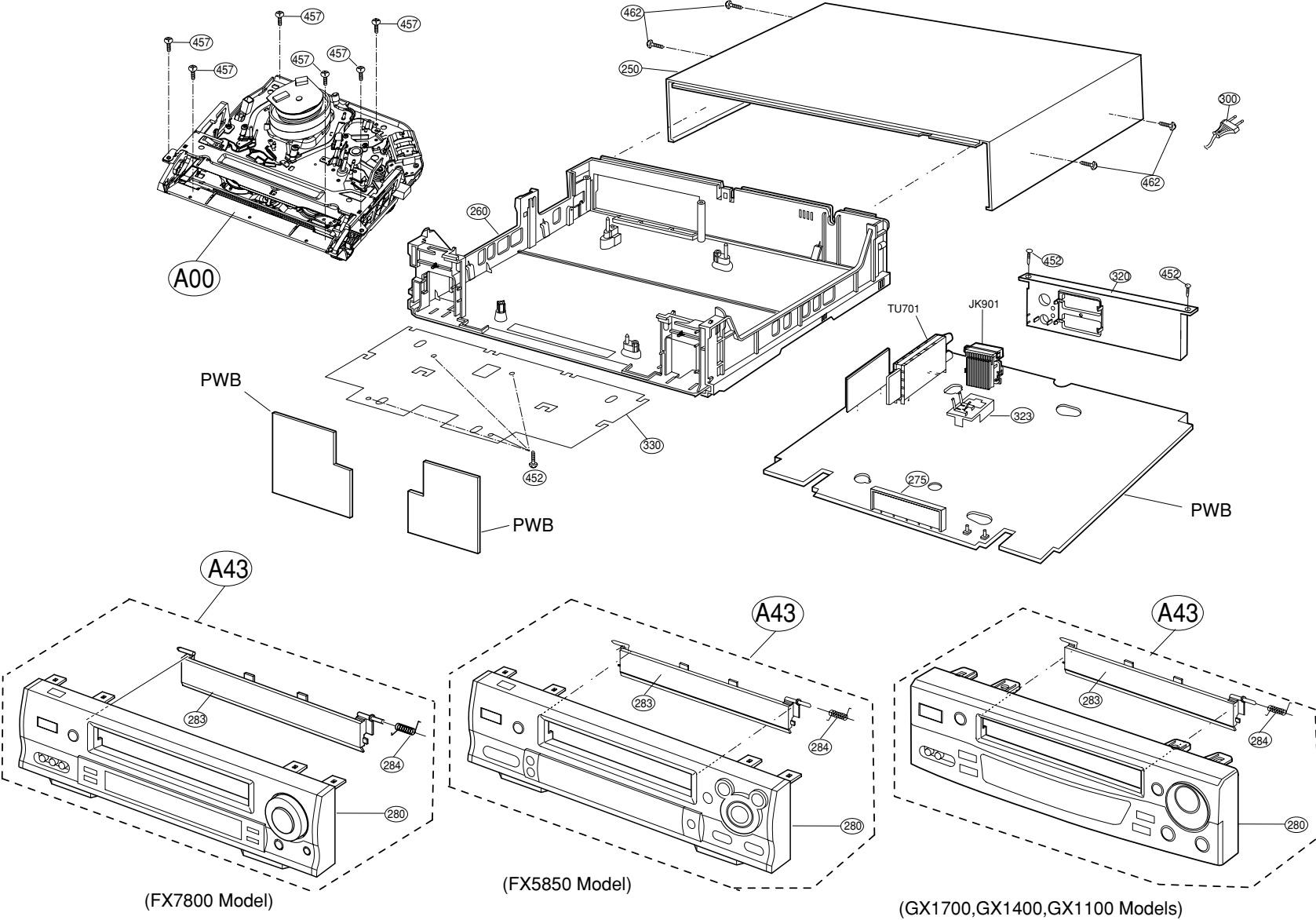
(3) No sound (Hi-Fi Model Only)



6. Hi-Fi Circuit (Hi-Fi Model Only)



MECHANICAL EXPLODED VIEW -1/1



MECHANICAL MAIN PARTS LIST 1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
250	S1-10R-012-8U0		CASE, TOP
260	—		FRAME, MAIN
275	S9-30R-010-2A0		HOLDER LED
280	—		PANEL FRONT (929TP:FX7800Z) <78>
280	—		PANEL FRONT (911TP:FX5850Z) <58>
280	—		PANEL, FRONT FRONT (CCA200TP) <11>
280	—		PANEL, FRONT FRONT (CCA204TP) <14>
280	—		PANEL, FRONT FRONT (CCA209TI) <17>
283	S5-80R-V00-6S0		DOOR CST (CFA929MI) <78>
283	S5-80R-V00-1Q0		DOOR CST (911MI:FX5850K) <58>
283	S5-80R-V00-6G0		DOOR CST (CCA200TP) <11>
283	S5-80R-V00-6K0		DOOR CST (CCA204TI) <14>
283	S5-80R-V00-6L0		DOOR CST (CCA209TI) <17>
284	S4-426-81A-000		SPR, DOOR
300	S4-10R-BHV-01A		CORD POWER H03VVH2-F2
320	S7-20R-D02-0C0		PANEL DISTRIBUTOR (PAL-2SCART<78,58>
320	S7-20R-D02-0A0		PANEL DISTRIBUTOR (PAL-1SCART) <11>
320	S7-20R-D02-0B0		PANEL DISTRIBUTOR (PAL-SCART<14,17>
323	S1-11R-008-9B0		CASE ASSY
330	S5-50R-021-0A0		COVER BOTTOM
452	S3-530-51A-000		SCREW, SPECIAL
457	87-741-097-410		SCREW, 3-12
462	S3-531-36A-000		SCREW, SPECIAL (FBK)
A00	—		DECK ASSY, VIDEO D33Y1 DI (4HF, <78,58>
A00	—		DECK ASSY, VIDEO D33Y1 DI (2HD, <11,14,17>
A43	S7-21R-F14-1G0		PANEL ASSY FRONT (FX7800K) <78>
A43	S7-21R-F13-5W0		PANEL ASSY, FRONT (FX5850K) <58>
A43	S7-21R-F20-1A0		PANEL ASSY, FRONT FRONT (CCA200T) <11>
A43	S7-21R-F20-1D0		PANEL ASSY, FRONT FRONT (CCA204T) <14>
A43	S7-21R-F20-1E0		PANEL ASSY, FRONT FRONT (CCA209T) <17>

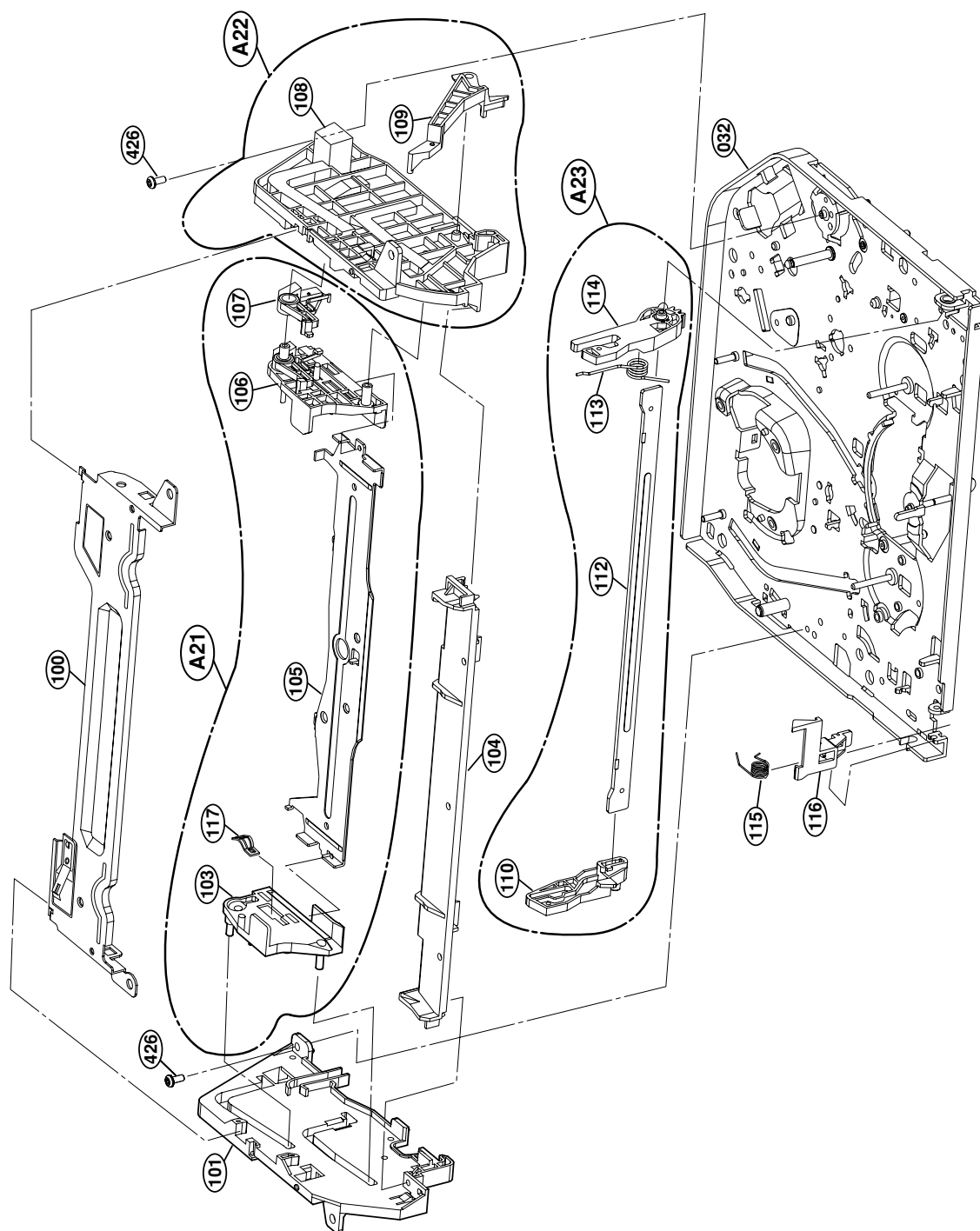
TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	K
<58>	HV-FX5850	K
<17>	HV-GX1700	K
<14>	HV-GX1400	K
<11>	HV-GX1100	K

COLOR NAME TABLE

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

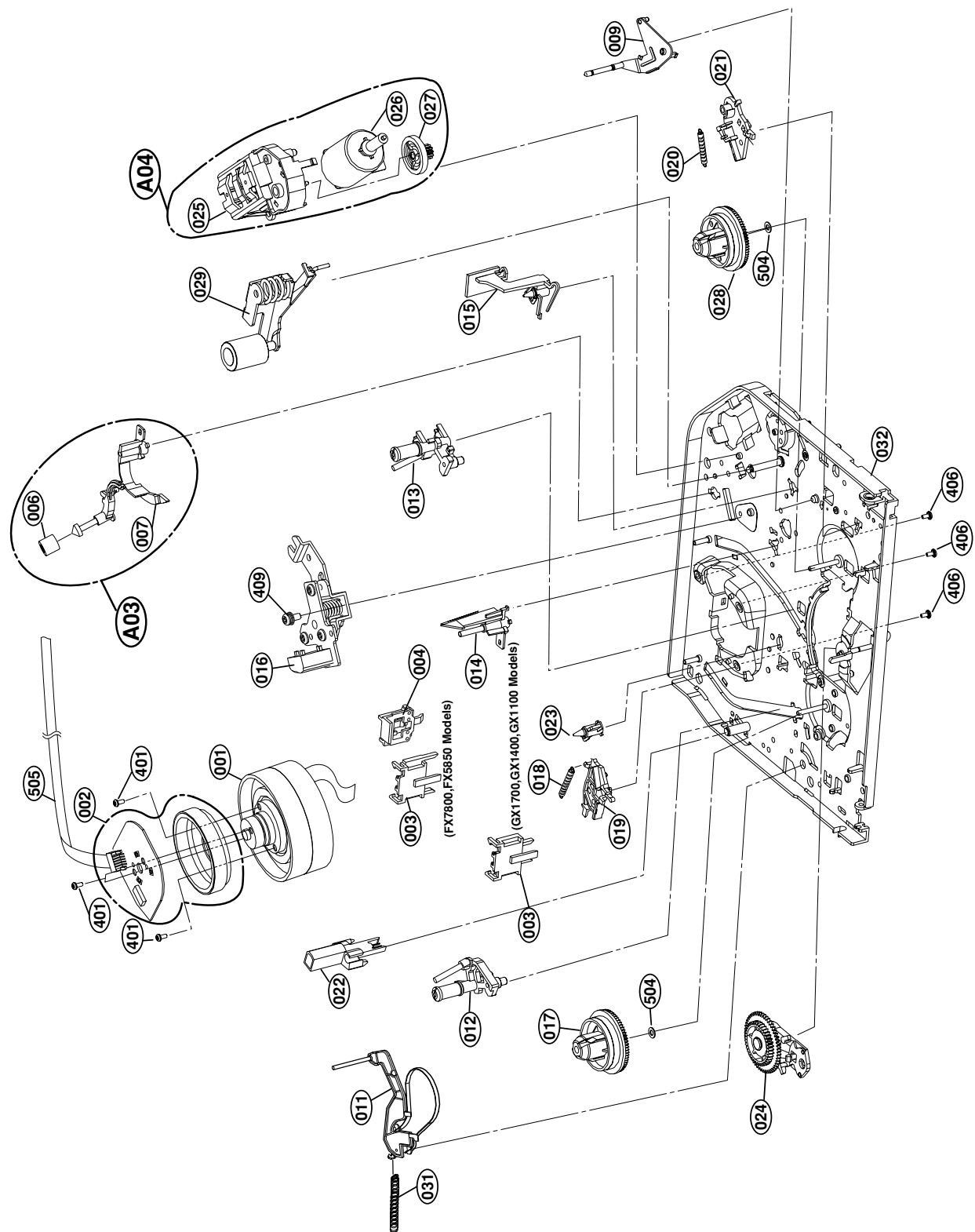
MECHANISM EXPLODED VIEW -1/3



MECHANISM MAIN PARTS LIST -1/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
100	S3-01R-003-2A0		PLATE ASSY TOP
101	S8-10R-006-8A0		BRACKET SIDE(L)
103	—		HOLDER SIDE(L)
104	S9-74R-001-9A0		GUIDE CST
105	—		HOLDER CST
106	—		HOLDER SIDE(R)
107	—		LEVER STOPPER(R)
108	—		BRACKET SIDE(R)
109	—		OPENER DOOR
110	—		ARM, F/L (L)
112	—		BODY F/L
113	S9-70R-005-6A0		SPRING F/L(R)
114	—		ARM F/L(R)
115	S9-70R-005-0A0		SPRING SWITCH
116	S5-10R-002-0A0		LEVER SWITCH
117	—		SPR, PLATE
426	87-261-094-410		PAN HEAD SCREW 3-6
A21	S9-31R-003-1A0		HOLDER ASSY
A22	S8-11R-001-8A0		BRACKET ASSY DOOR
A23	S2-61R-001-6A0		ARM ASSY F/L

MECHANISM EXPLODED VIEW -2/3

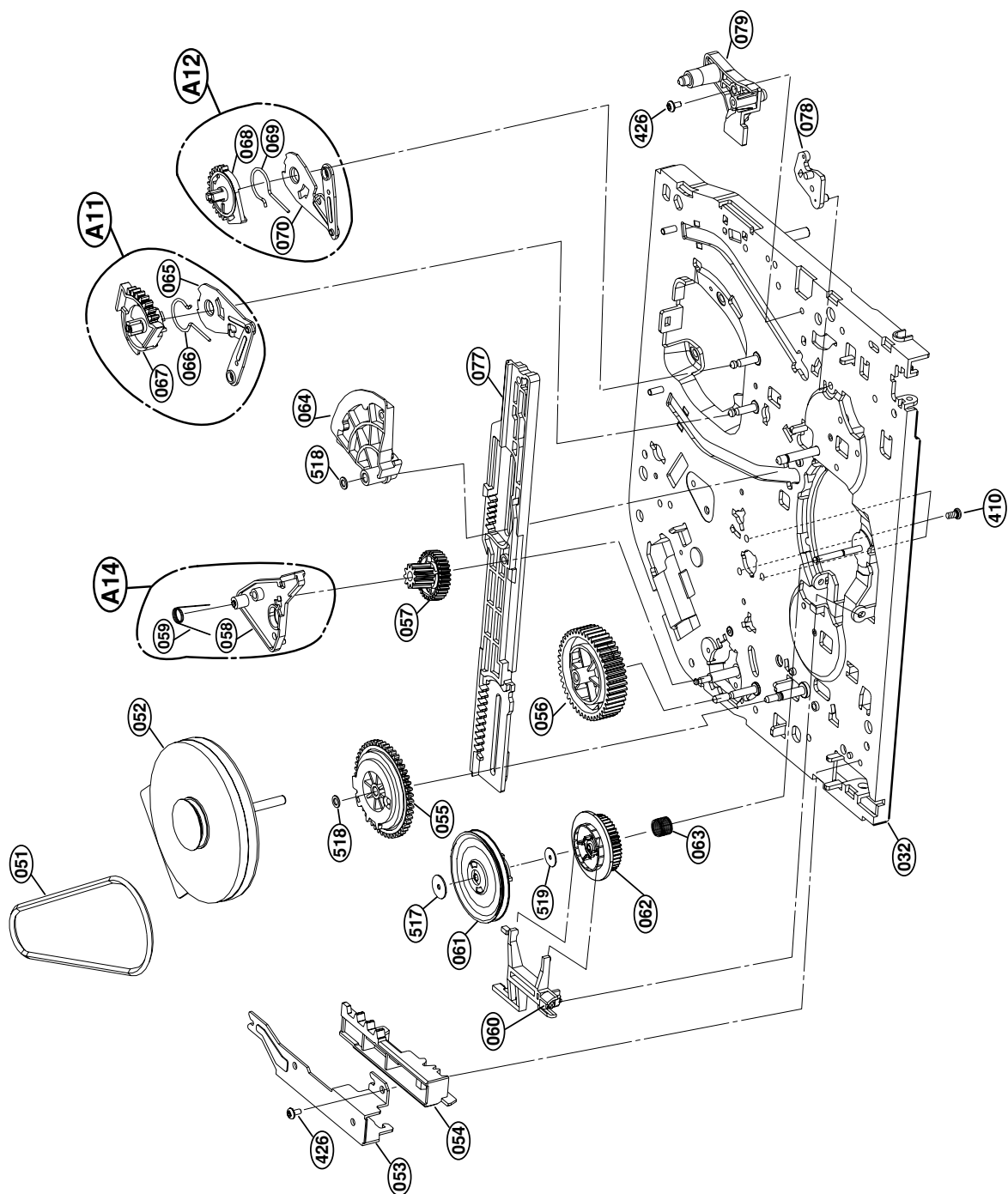


MECHANISM MAIN PARTS LIST -2/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
001	S7-23R-D20-6B0		DRUM(CIRC) ASSY UPPER ASSY PAL<78,58>
001	S7-23R-D10-4B0		DRUM(CIRC) ASSY SUB D33-2CH SP<11,14,17>
002	S6-80R-B00-2A0		MOTOR(MECH) DRUM GVD-D33Y
003	S9-30R-010-8A0		HOLDER FPC(6CH)<78,58>
003	S9-30R-010-6A0		HOLDER FPC(2CH)<11,14,17>
004	S0-06R-002-0A0		CAP,FPC
006	—		ROLLER CLEANER
007	—		ARM CLEANER
009	S2-61R-001-7A0		ARM ASSY T/UP(D-33K)
011	S2-61R-001-8A0		ARM ASSY TENSION (D-33K)
012	S0-41R-000-3A0		BASE ASSY P2
013	S0-41R-000-4A0		BASE ASSY P3
014	S0-41R-000-7A0		BASE ASSY P4
015	S8-70R-000-3A0		OPENER LID
016	S0-41R-000-5B0		BASE ASSY A/C HEAD
017	S4-08R-000-1B0		REEL S
018	S9-70R-005-4A0		SPRING SB
019	S4-21R-000-3A0		BRAKE ASSY S
020	S9-70R-005-3A0		SPRING TB
021	S4-21R-000-4A0		BRAKE ASSY T
022	S5-238-33B-000		HEAD FE D33
023	S9-80R-001-0A0		SUPPORTER CST
024	S2-61R-001-3A0		ARM ASSY IDLER
025	—		BRACKET L/D MOTOR
026	—		MOTOR ASSY L/D
027	S4-70R-002-5A0		GEAR WHEEL
028	S4-08R-000-2B0		REEL T
029	S2-61R-001-1A0		ARM ASSY PINCH
031	S9-70R-006-9A0		SPRING TENSION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
401	SM-PC0-261-418		SCREW,2.6-4.0
406	87-261-094-410		PAN HEAD SCREW 3-6
409	87-741-095-410		SCREW,PAN HEAD 3.0-8.0
504	S3-540-01B-000		WASHER,P.S 3.1-6-0.5
505	S8-50R-HE2-2Z0		CABLE,FLEXIBLE 220M/M
A03	S2-61R-001-5A0		CLEANER ARM ASSY
A04	S8-11R-001-9A0		BRACKET ASSY L/D MOTOR

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	K
<58>	HV-FX5850	K
<17>	HV-GX1700	K
<14>	HV-GX1400	K
<11>	HV-GX1100	K

MECHANISM EXPLODED VIEW -3/3

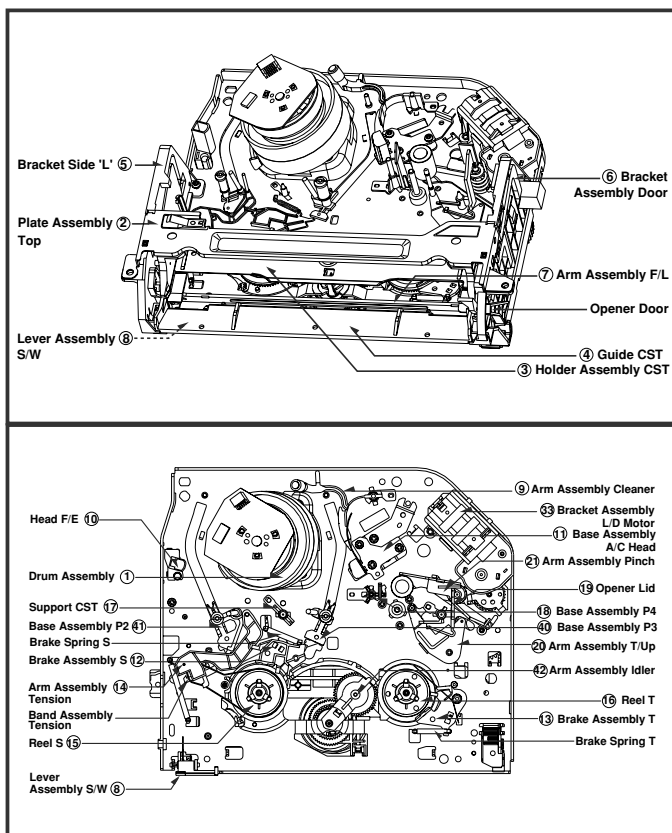


MECHANISM MAIN PARTS LIST -3/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
051	S4-00R-000-5A0		BELT CAPSTAN
052	S6-80R-A00-1A0		MOTOR(MECH) CAPSTAN F2QSB53
053	S9-74R-001-8A0		GUIDE RACK F/L
054	S4-70R-003-7A0		GEAR RACK F/L
055	S4-70R-003-3A0		GEAR DRIVE
056	S4-70R-003-2B0		GEAR,CAM
057	S4-70R-003-6B0		GEAR CONNECT
058	—		BRAKE CAPSTAN<78,58>
059	S9-70R-005-9A0		SPRING CAPSTAN<78,58>
060	S5-10R-002-5B0		F/R LEVER
061	S2-65R-000-3A0		CLUTCH ASSY D33K
062	S4-70R-005-8A0		GEAR,UP/D33K
063	S9-70R-005-1A0		SPRING UP/D
064	S4-70R-003-4A0		GEAR SECTOR
065	—		LEVER P3
066	S9-70R-004-6A0		SPRING L/D
067	—		GEAR P3
068	—		GEAR P2
069	S9-70R-004-6A0		SPRING L/D
070	—		LEVER P2
077	S3-00R-015-7A0		PLATE SLIDER
078	S5-10R-002-2A0		LEVER TENSION
079	S0-40R-002-1A0		BASE,TENSION(D-33K)
410	SA-PF0-262-218		SCREW,PAN HEAD 2.6-6.8
426	87-261-094-410		PAN HEAD SCREW 3-6
517	SW-ZZR-000-4B0		WASHER STOPPER
518	SW-ZZR-000-4A0		WASHER STOPPER
519	SW-ZZR-000-4D0		WASHER STOPPER
A11	S4-70R-002-8A0		GEAR ASSY P3
A12	S4-70R-002-6A0		GEAR ASSY P2
A14	S4-21R-000-5C0		CAPSTAN BRAKE ASSY<78,58>

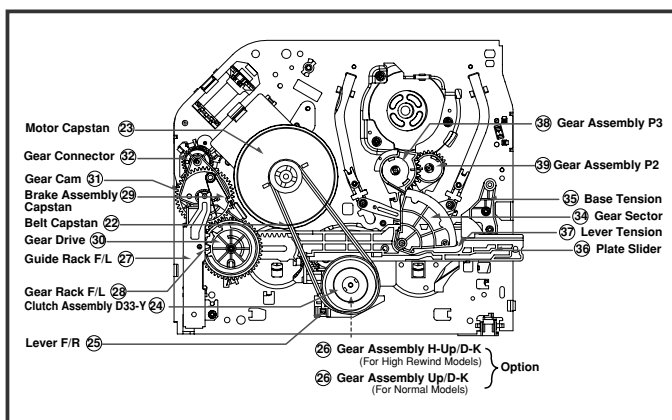
DECK MECHANISM PARTS LOCATIONS

• Top View



Pracedure Starting No.	Part	Fixing Type	Fig-ure
1	Drum Assembly	3 Screws , Cap FPC	A-1
2	Plate Assembly Top	Two Hooks	A-2
3	Holder Assembly CST	Chassis Hole	A-2
4	Guide CST	2 Hooks	A-2
2,3,4	Bracket Side (L)	1 Screw	A-2
2,3,4	Bracket Assembly Door	1 Screw	A-2
2,3,4,5,6	Arm Assembly F/L	Chassis Hole	A-2
2,3,4,5	Lever Assembly S/W	Chassis Hole	A-2
9	Arm Assembly Cleaner	Chassis Embossing	A-3
10	Head F/E	2 Hooks	A-3
11	Base Assembly A/C Head	1 Screw	A-3
12	Brake Assembly S	Chassis Hole	A-4
2,3	Brake Assembly T	Chassis Hole	A-4
2,3,12,	Arm Assembly Tension	Chassis Hole	A-4
2,3,12,14	Reel S	Chassis Shaft	A-4
2,3,13	Reel T	Chassis Shaft	A-4
17	Support CST	Chassis Embossing	A-5
18	Base Assembly P4	Chassis Embossing	A-5
19	Opener Lid	Chassis Embossing	A-5
20	Arm Assembly T/Up	Chassis Embossing	A-5
21	Arm Assembly Pinch	Chassis Shaft	A-5

• Bottom View



NOTE : When reassembly perform the procedure in the reverse order.

- 1) When reassembling, confirm Mechanism and Mode Switch Alignment Position (Pefer to Page 95)
- 2) When disassembling, the Parts for Starting No. Should be removed first.

Pracedure Starting No.	Part	Fixing Type	Fig-ure
22	Belt Capstan	3 Screws	A-6
23	Motor Capstan	1 Washer	A-6
24	Clutch Assembly D33-K	1 Hook	A-6
22,24	Lever F/R	2 Washers	A-6
22,24	Gear H-Up/D-K	1Screw	A-7
27	Guide Rack F/L		A-7
27, 28	Gear Rack F/L	Chassis Shaft	A-7
27, 28	Brake Assembly Capstan	1 Washer	A-8
27, 28, 29	Gear Drive	Chassis Shaft	A-8
27, 28, 29, 30	Gear Cam	Chassis Shaft	A-8
32	Gear Connector	Chassis Shaft	A-8
33	Bracket Assembly L/D Motor	3 Hooks	A-8
34	Gear Sector	3 Washers	A-9
35	BaseTension	1 Screw	A-9
36	Plate Slider	Chassis Shaft	A-9
22, 24, 25, 27, 28, 30, 34, 35	Lever Tension	Chassis Hole	A-9
34	Gear Assembly P3	2 Hooks	A-10
34, 38	Gear Assembly P2	Chassis Hole	A-10
34, 38, 39	Base Assembly P3	Chassis Hole	A-10
34, 38, 39, 40	Base Assembly P2	Chassis Hole	A-10
1, 2	Arm Assembly Idler	1 Hook	A-10

DECK MECHANISM DISASSEMBLY

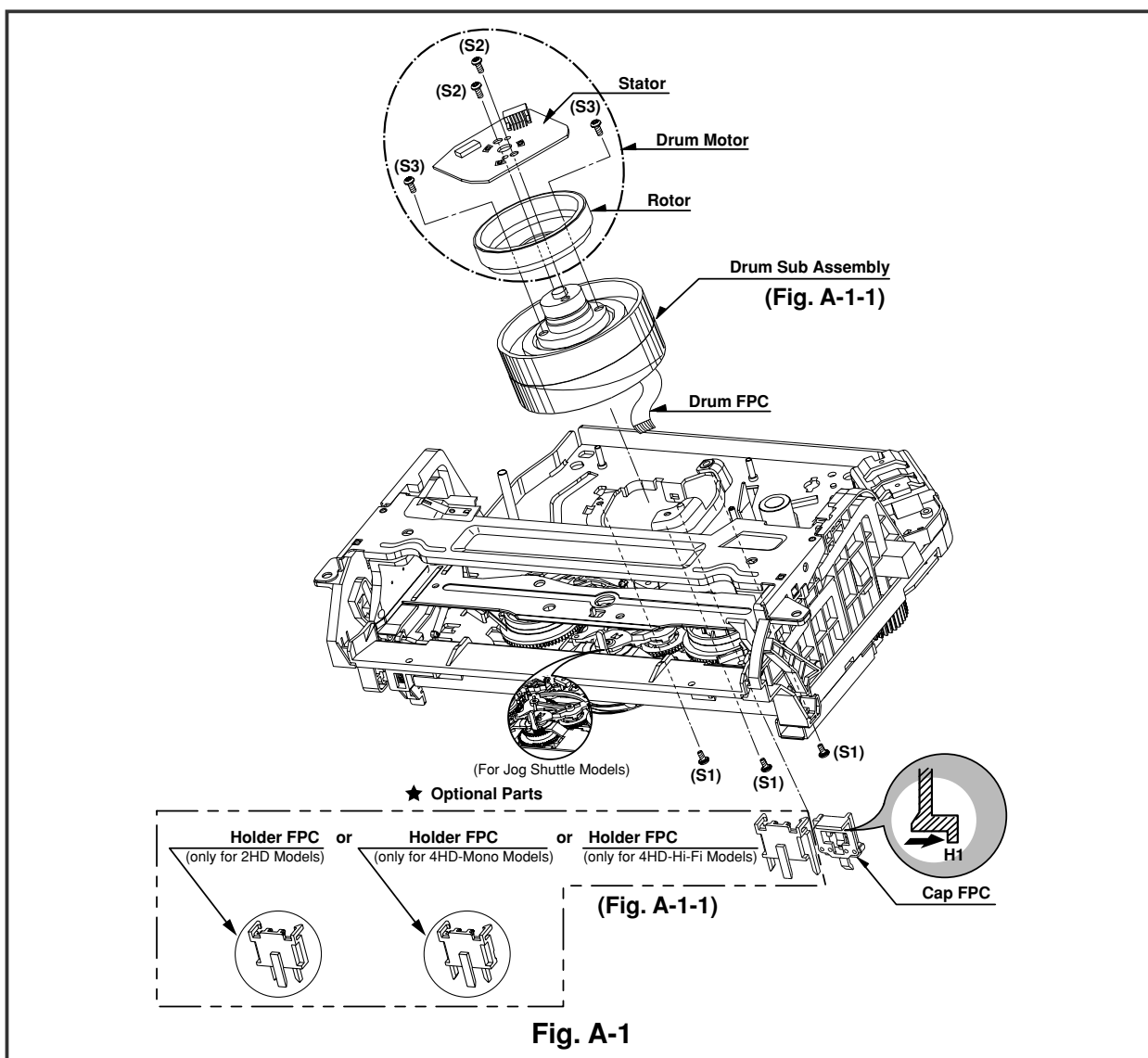


Fig. A-1

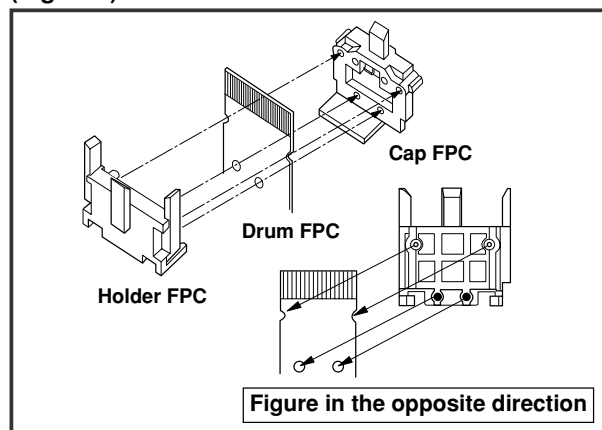
1. Drum Assembly (Fig. A-1-1)

- 1) Unhook the (H1) on the back side of the Chassis and separate the Cap FPC.
- 2) Remove three Screws (S1) and lift up the Drum Assembly.
- 3) Remove two Screws (S2) and Separate the Stator of Drum Motor.
- 4) Remove two Screws (S3) and Separate the Rotor of Drum Motor from the Drum Sub Assembly.

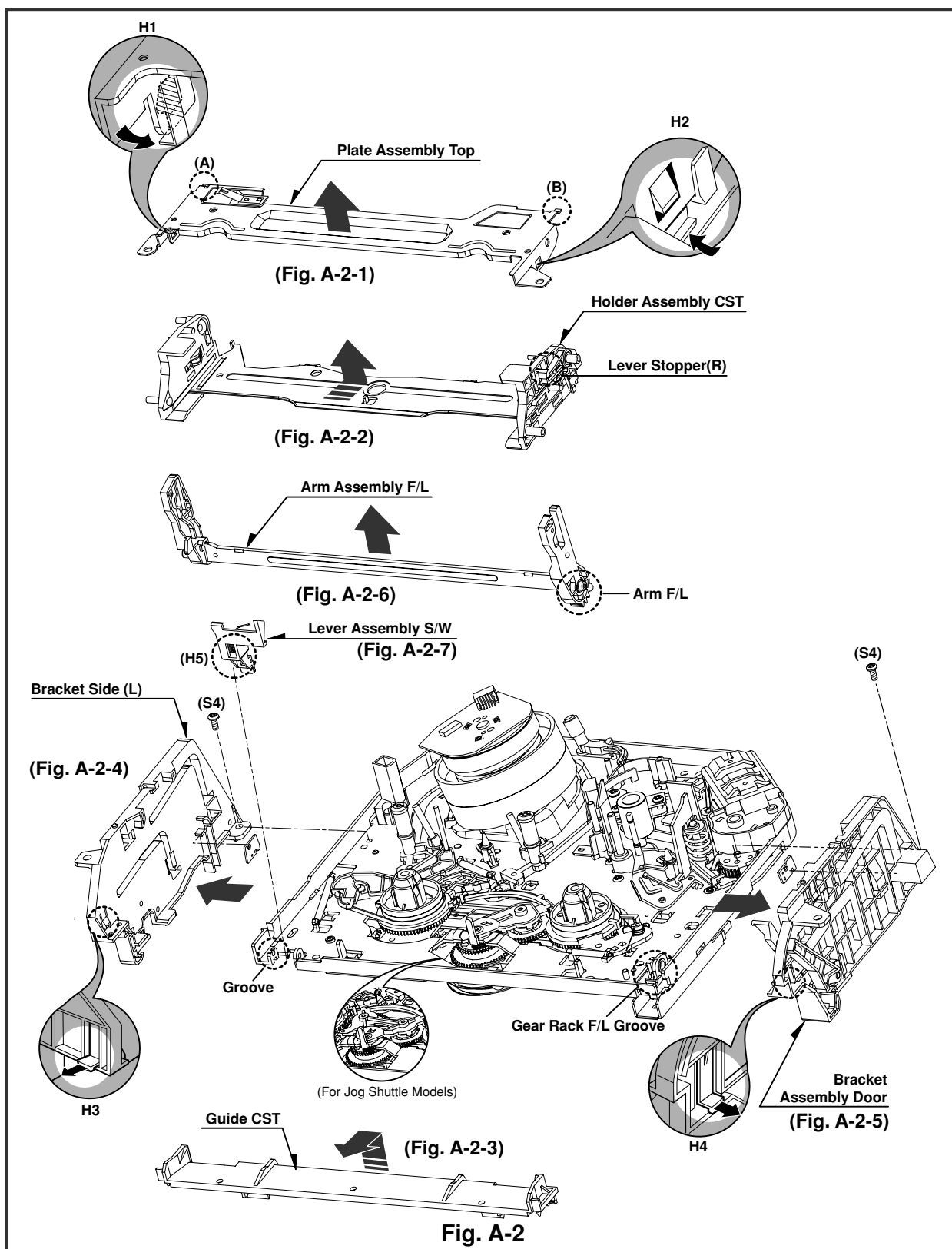
NOTE

- (1) When reassembling Cap FPC, two Holes of Drum FPC are inserted to the two Bosses of Holder FPC correctly. (Refer to Fig. B-1)

(Fig. B-1)



DECK MECHANISM DISASSEMBLY



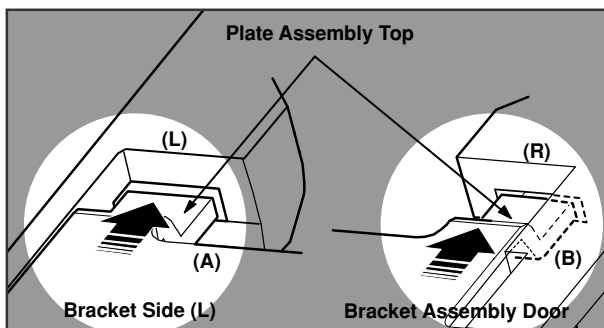
DECK MECHANISM DISASSEMBLY

2. Plate Assembly Top (Fig. A-2-1)

- 1) Unhook the (H1) and separate the Left Side.
- 2) Unhook the (H2) and lift up the Plate Assembly Top.

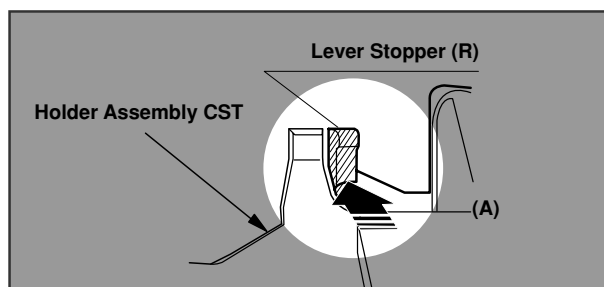
NOTE

- (1) When reassembling, confirm (A),(B) Part of the Plate Assembly Top is inserted to the (L),(R) Grooves of the Bracket Side(L) and Bracket Assembly Door.

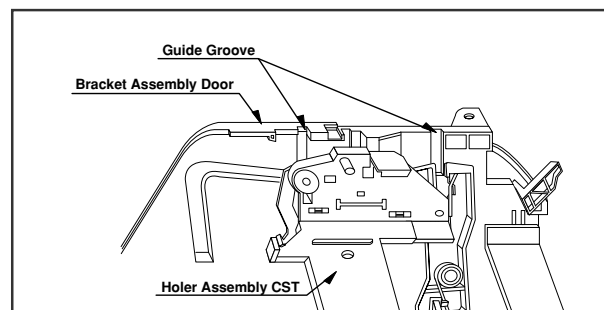


3. Holder Assembly CST (Fig.A-2-2)

- 1) Push the Lever Stopper (R) in the direction of the arrows (A) and move the Holder Assembly CST.

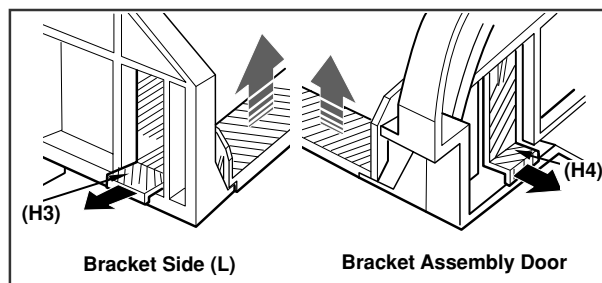


- 2) Push the Bracket Assembly Door to the right and lift up the Holder Assembly CST along the Guide Groove of the Bracket Assembly Door.



4. Guide CST (Fig.A-2-3)

- 1) Unhook(H3) in the direction of the arrow and separate the left side.
- 2) Unhook (H4) as above No.1) and disassemble the Guide CST in the direction of the arrow.



5. Bracket Side(L) (Fig. A-2-4)/ Bracket Assembly Door (Fig.A-2-5)

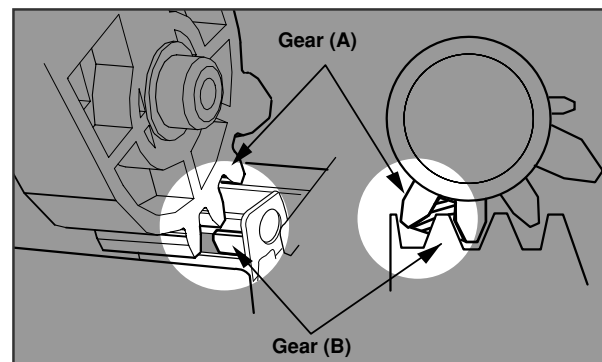
- 1) Remove the Screw (S4) and disassemble the Bracket Side(L) in the front.
- 2) Remove the Screw (S4) and disassemble the Bracket Assembly Door in the front.

6. Arm Assembly F/L (Fig. A-2-6)

- 1) Push the Arm Assembly F/L to the left and lift up it.

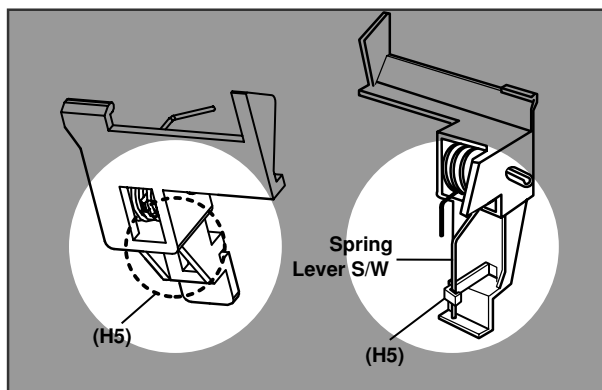
NOTE

- (1) When reassembling, confirm that the Gear(A) of the Arm F/L and the Gear(B) of the Gear Rack F/L are assembled as below.

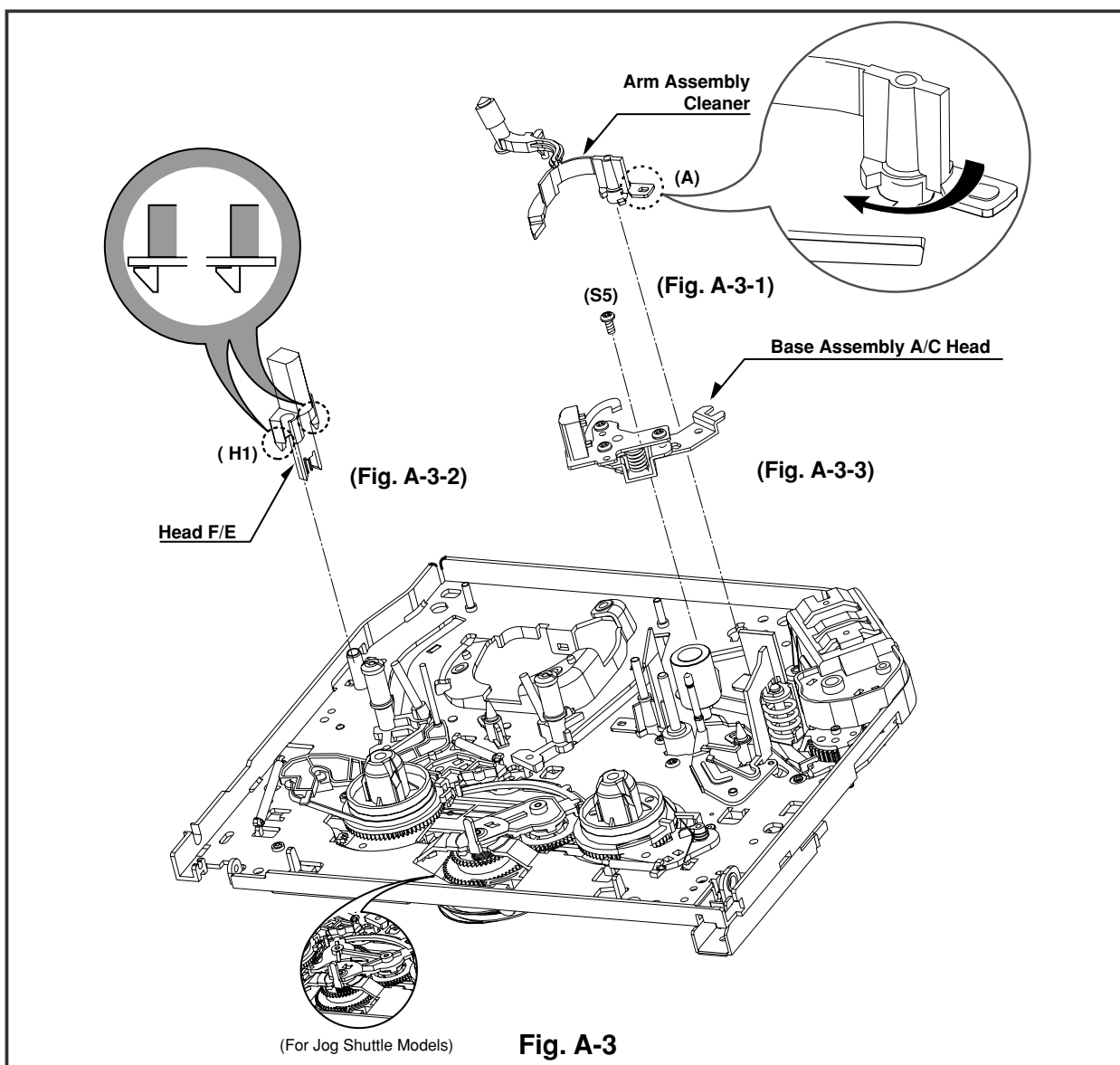


7. Lever Assembly S/W (Fig. A-2-7)

- 1) Hook the Spring Lever S/W on (H5).
- 2) Lift up the left side of the Lever S/W from the Groove(A) of the Chassis.

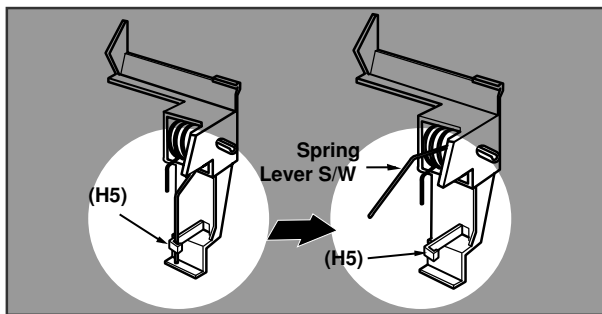


DECK MECHANISM DISASSEMBLY



NOTE

- (1) Place the Spring Lever S/W of the above (No.1) as original position.



8. Arm Assembly Cleaner(Fig. A-3-1)

- 1) Break away the (A) part shown above Fig. A-3-1 from the Embossing of the Chassis in the clockwise direction and lift up the Arm Assembly Cleaner.

9. Head F/E (Fig. A-3-2)

- 1) Unhook the two Hooks (H1) on the back side of the Chassis and lift up the Head F/E.

10. Base Assembly A/C Head (Fig. A-3-3)

- 1) Remove the Screw (S5) and lift up the Base Assembly A/C Head.

DECK MECHANISM DISASSEMBLY

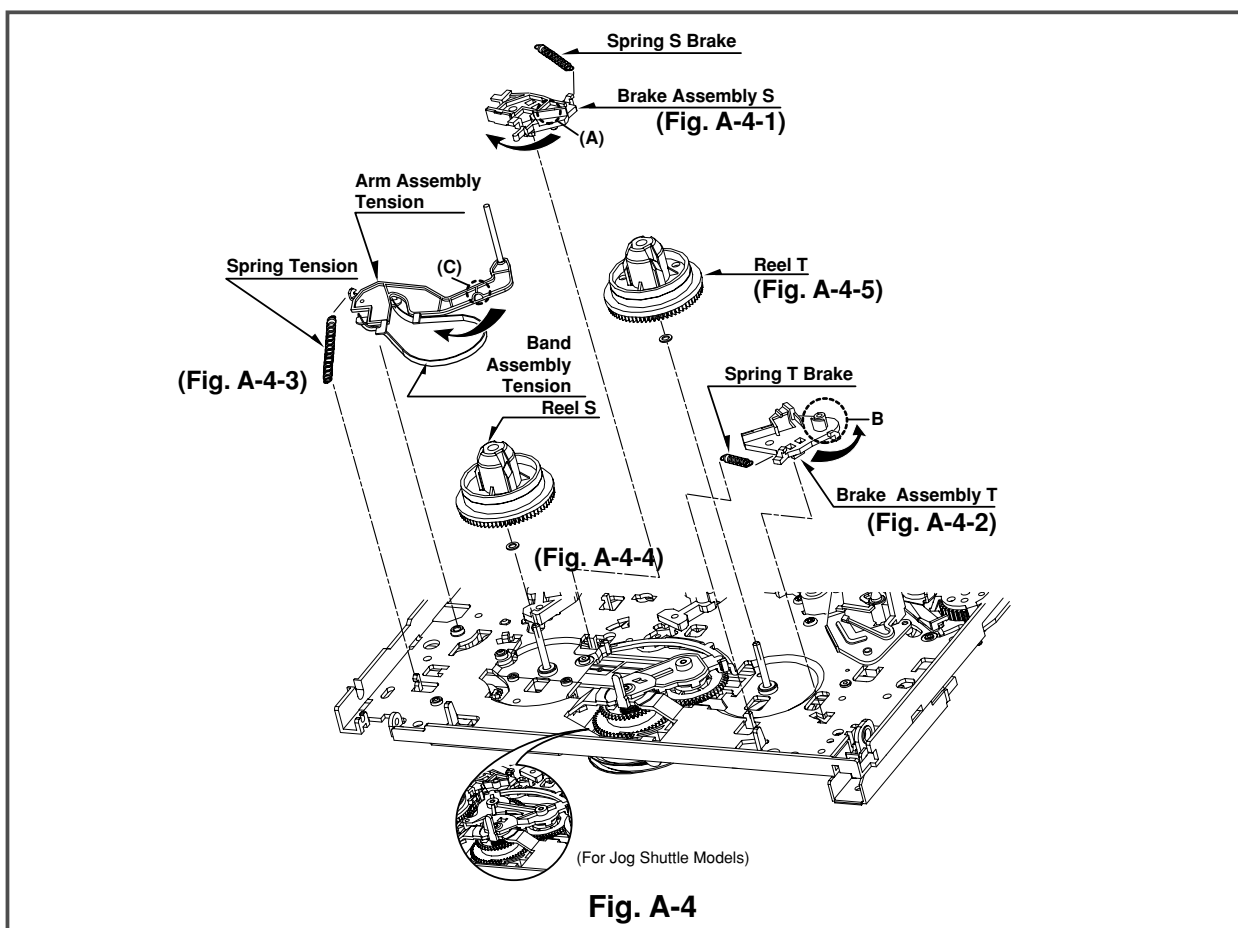


Fig. A-4

11. Brake Assembly S (Fig. A-4-1)

- 1) Remove the Spring S Brake.
- 2) Hold the (A) part shown above Fig. A-4-1 and turn to the clockwise direction, and then lift up the Brake Assembly S.

NOTE

- (1) When reassembling, be careful not to change the Spring with below No.12.(Refer to Fig. B-2).

12. Brake Assembly T (Fig. A-4-2)

- 1) Remove the Spring T Brake.
- 2) Hold the (B) part shown above Fig. A-4-2 and turn to the counterclockwise direction, and then lift up the Brake Assembly T.

NOTE

- (1) When reassembling, be careful not to change the Spring with above No.11.(Refer to Fig. B-2).

(Difference for Springs)

(Fig. B-2)

	Spring T Brake Color (Black)
	Spring S Brake
	Spring Tension

13. Arm Assembly Tension (Fig. A-4-3)

- 1) Remove the Spring Tension.
- 2) Hold the (C) part shown above Fig. A-4-3 and turn to the clockwise direction, and then lift up the Arm Assembly Tension.

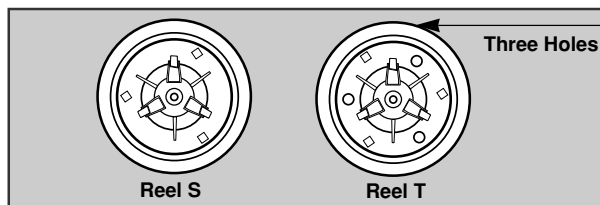
NOTE

- (1) When reassembling, be careful not to change the Spring with above No.11,12.(Refer to Fig. B-2).

14. Reel S (Fig. A-4-4) & Reel T (Fig. A-4-5)

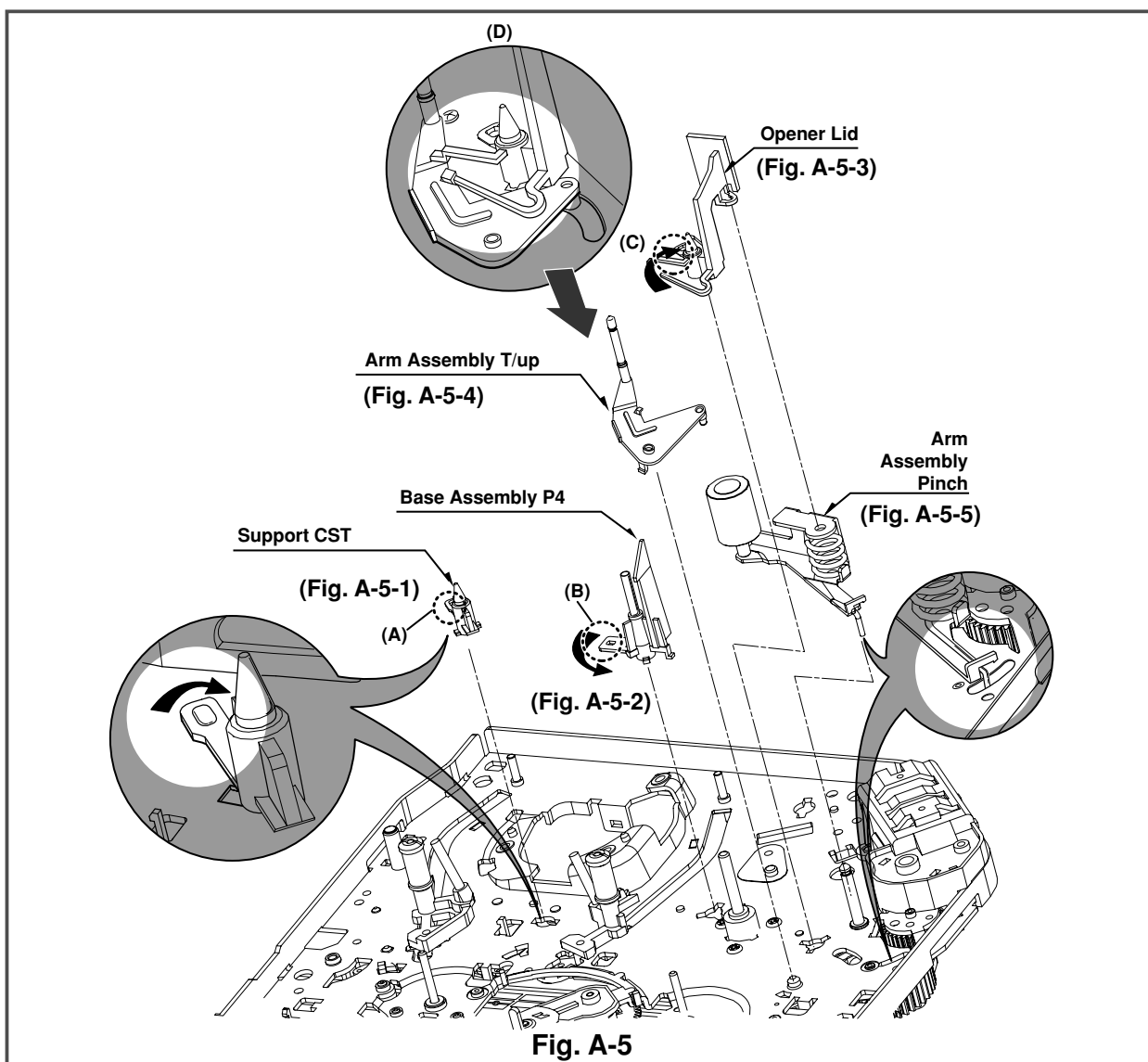
NOTE

- 1) Lift up the Reel S and Reel T.
- (1) When reassembling, be careful not to change the Reel S and Reel T each other.



- (2) Confirm two Slide Washers under the Reel S and Reel T.

DECK MECHANISM DISASSEMBLY



15. Support CST (Fig. A-5-1)

- 1) Break away the (A) part shown above Fig. A-5-1 from the Embossing of the Chassis in the clockwise direction, and lift up the Support CST.

16. Base Assembly P4 (Fig. A-5-2)

- 1) Break away the (B) part shown above Fig. A-5-2 from the Embossing of the Chassis in the counterclockwise direction and lift up the Base Assembly P4.

17. Opener Lid (Fig. A-5-3)

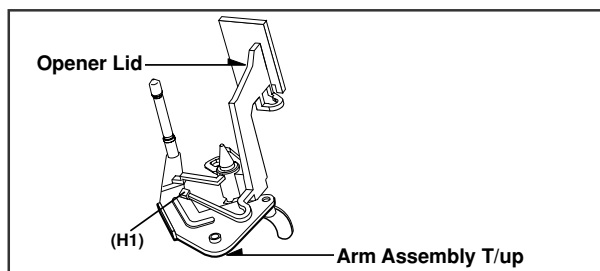
- 1) Break away the (C) Part of the Opener Lid from the Embossing of the Chassis in the Clockwise direction and lift up the Opener Lid.

18. Arm Assembly T/up (Fig. A-5-4)

- 1) Just lift up the Arm Assembly T/UP.

NOTE

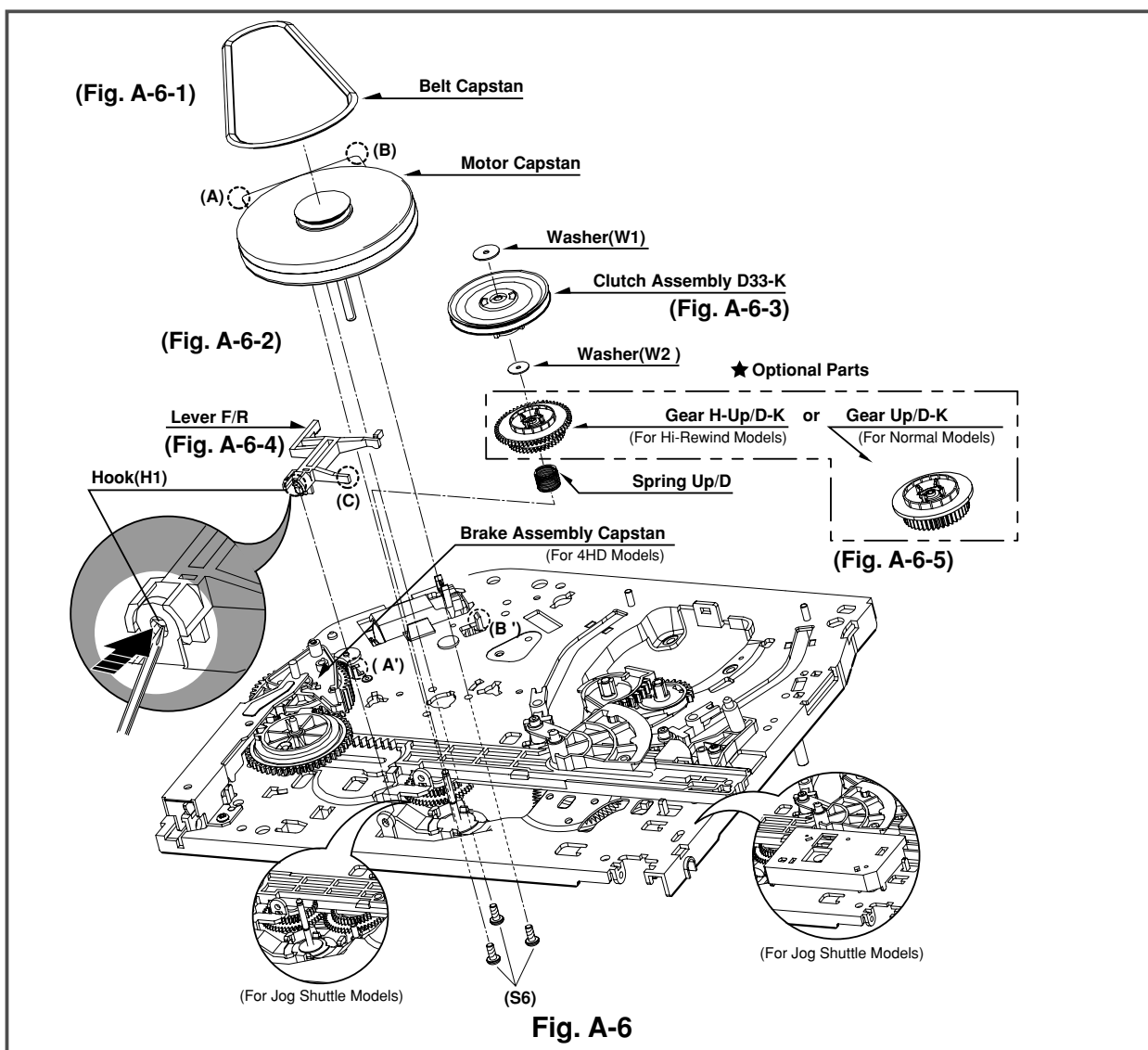
- (1) When reassembling, confirm the opener lid is placed on the Hook(H1) of the Arm Assembly T/UP as below figure.



19. Arm Assembly Pinch (Fig. A-5-5)

- 1) Lift up the Arm Assembly Pinch.

DECK MECHANISM DISASSEMBLY



20. Belt Capstan (Fig. A-6-1)/ Motor Capstan (Fig. A-6-2)

- 1) Remove the Belt Capstan.
- 2) Remove three Screws(S6) on the back side of the Chassis and lift up the Motor Capstan.

NOTE

- (1) When reassembling, Confirm the (A), (B) parts of Motor Capstan is located to the (A'), (B') of the Chassis.

21. Clutch Assembly D33-Y (Fig. A-6-3)

- 1) Remove the Washer(W1) and lift up the Clutch Assembly D33-Y.

22. Lever F/R (Fig. A-6-4)

- 1) Unhook the (H1) shown above Fig. A-6-4 and lift up the Lever F/R.

NOTE

- (1) When reassembling, move the (C) part of the Lever F/R up and down, then confirm if it is returned to original position.

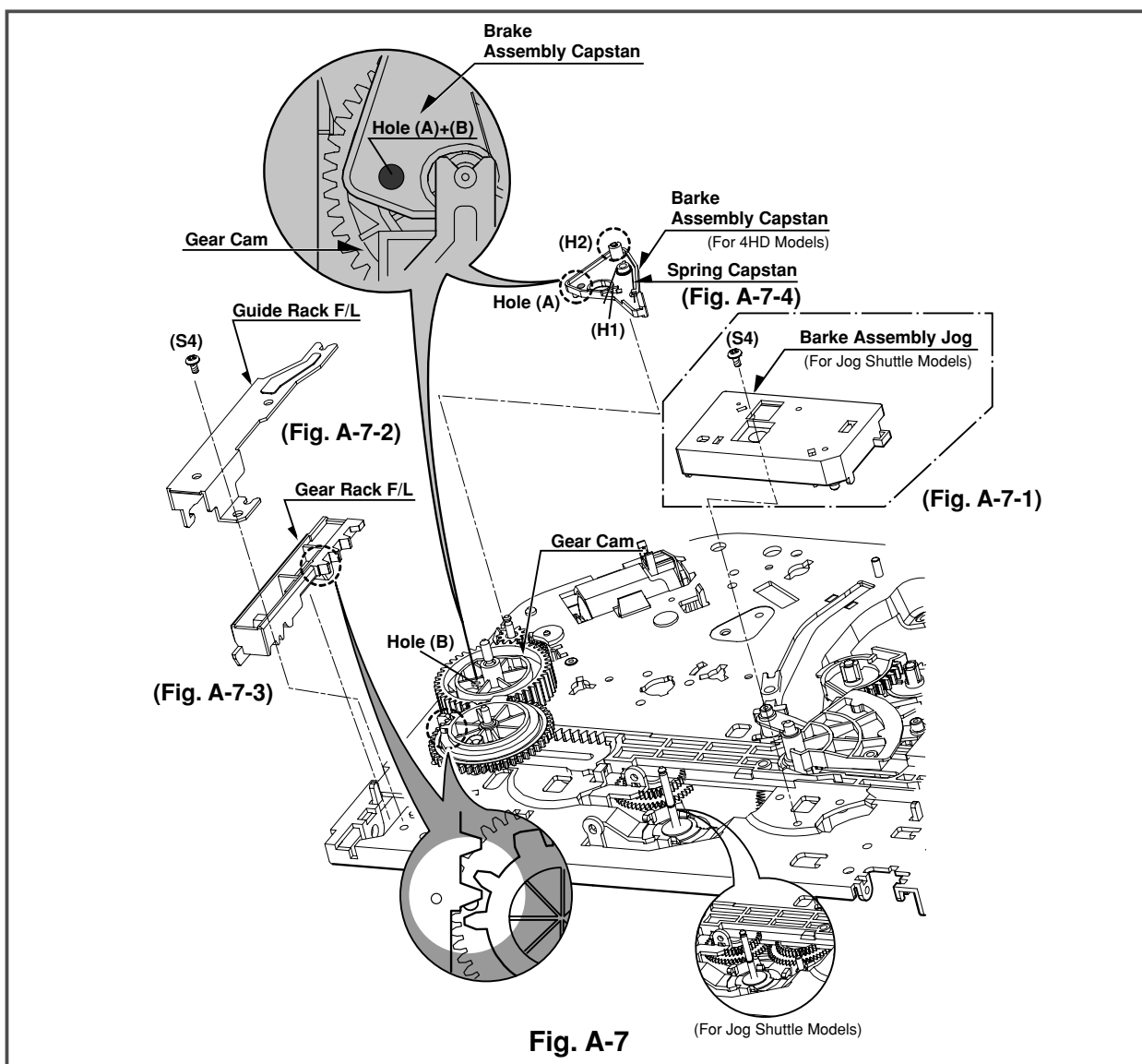
23. Gear H-Up/D-K or Gear Up/D-K (Fig. A-6-5)

- 1) Remove the Washer(W2) and lift up the Gear H-up/D-K.
- 2) Remove the Spring Up/D.

NOTE

- (1) Gear H-Up/D-K is for Hi-Rewind Models.
- (2) Gear Up/D-K is for Normal Models except Hi-Rewind Models.

DECK MECHANISM DISASSEMBLY



24. Bracket Assembly Jog (Fig. A-7-1) (Jog shuttle model option)

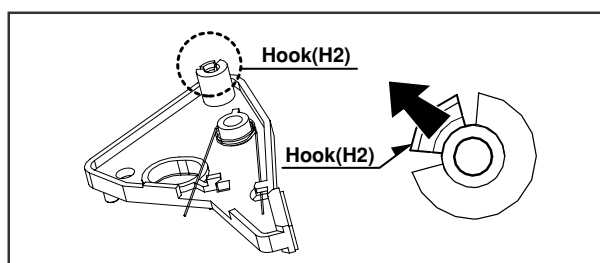
- 1) Remove the Screw(S4) and lift up the Bracket Assembly Jog.

25. Guide Rack F/L (Fig. A-7-2)/ Gear Rack F/L (Fig. A-7-3)

- 1) Remove the Screw(S4) and lift up the Guide Rack F/L.
- 2) Lift up the Gear Rack F/L.

26. Brake Assembly Capstan (Fig. A-7-4) (4HD model option)

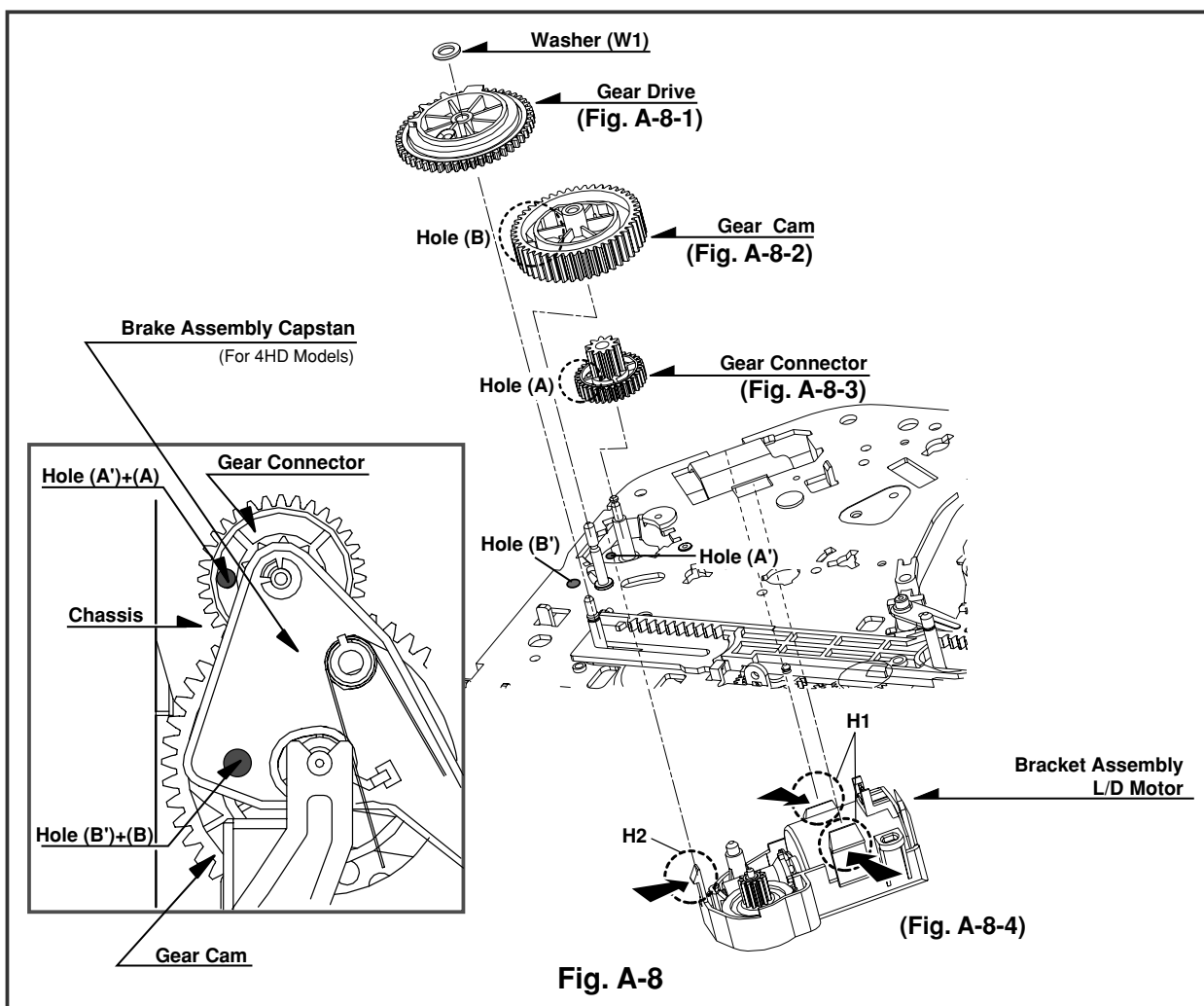
- 1) Hook the Spring Capstan on the Hook(H1).
- 2) Unhook the Hook(H2) and lift up the Brake Assembly Capstan.(Refer to Fig. to the right)



NOTE

- (1) When reassembling, confirm that the Hole(A) of the Brake Assembly Capstan is aligned to the Hole(B) of the Gear Cam.
(Refer to above Fig. A-7-4).

DECK MECHANISM DISASSEMBLY



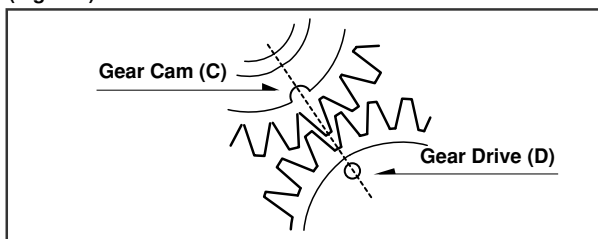
27. Gear Drive (Fig. A-8-1)/ Gear Cam (Fig. A-8-2)/ Gear Connector (Fig. A-8-3)

- 1) Remove the Washer(W1) and lift up the Gear Drive.
- 2) Lift up the Gear Cam.
- 3) Lift up the Gear Connector.

NOTE

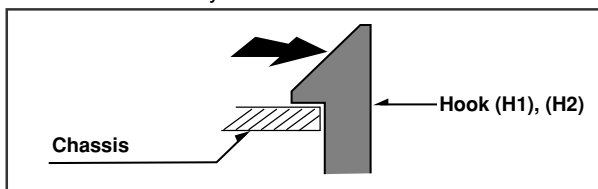
- (1) When reassembling, confirm that the Hole (A) of the Gear Connector is aligned to the Hole (A') of the Chassis (Fig. A-8-3).
- (2) When reassembling, confirm that the Hole (B) of the Gear Cam is aligned to the Hole (B') of the Chassis (Fig. A-8-2).
- (3) When reassembling, confirm that the (C) part of the Gear Cam is aligned to the (D) part of the Gear Drive as shown Fig. B-3

(Fig. B-3)

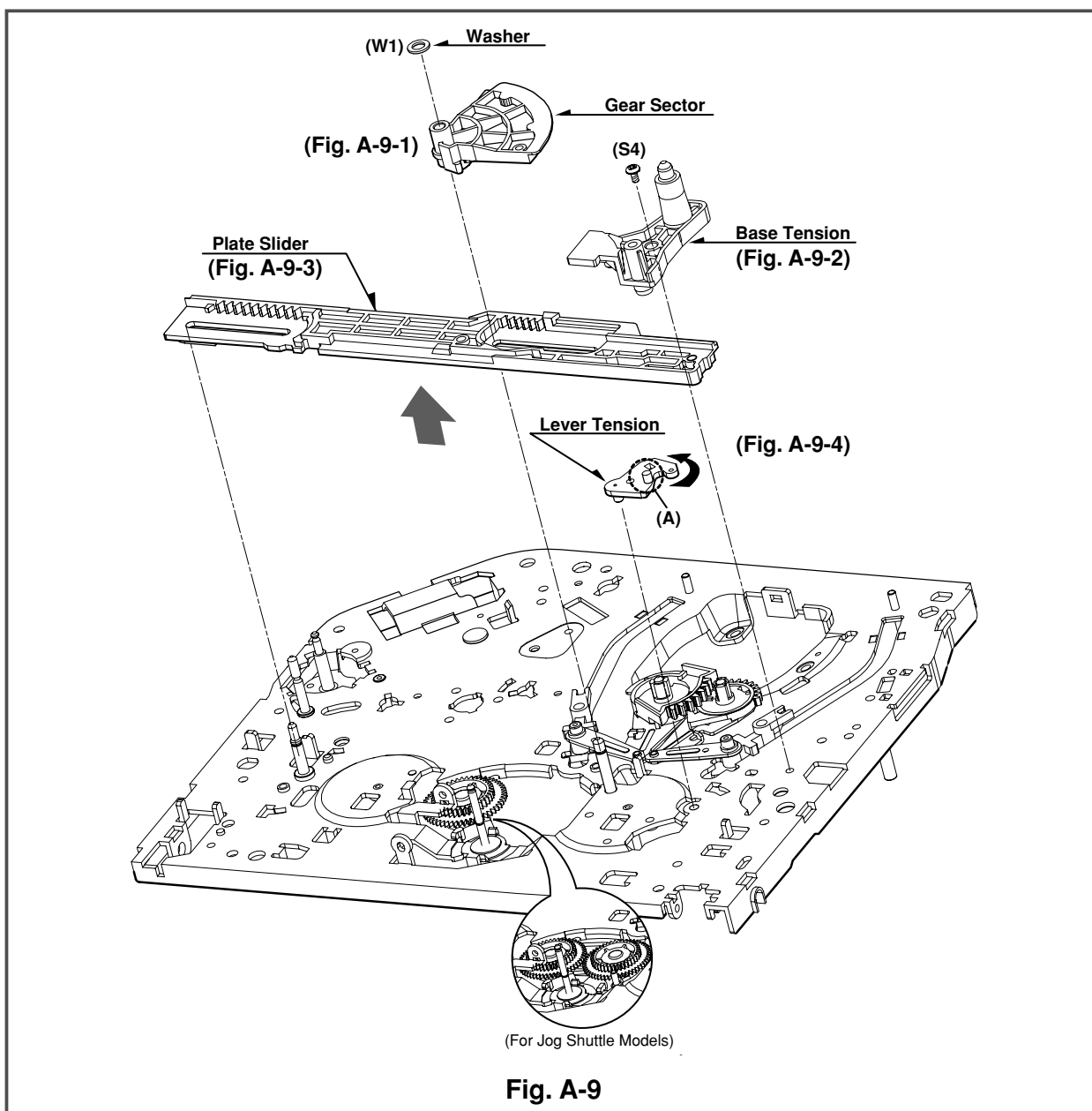


28. Bracket Assembly L/D Motor (Fig. A-8-4)

- 1) Unhook the three Hooks(H1),(H2) and push down the Bracket Assembly L/D Motor.



DECK MECHANISM DISASSEMBLY



29. Gear Sector (Fig. A-9-1)

- 1) Remove the Washer(W1) and lift up the Gear Sector.

30. Base Tension (Fig. A-9-2)/

Plate Slider (Fig. A-9-3)/

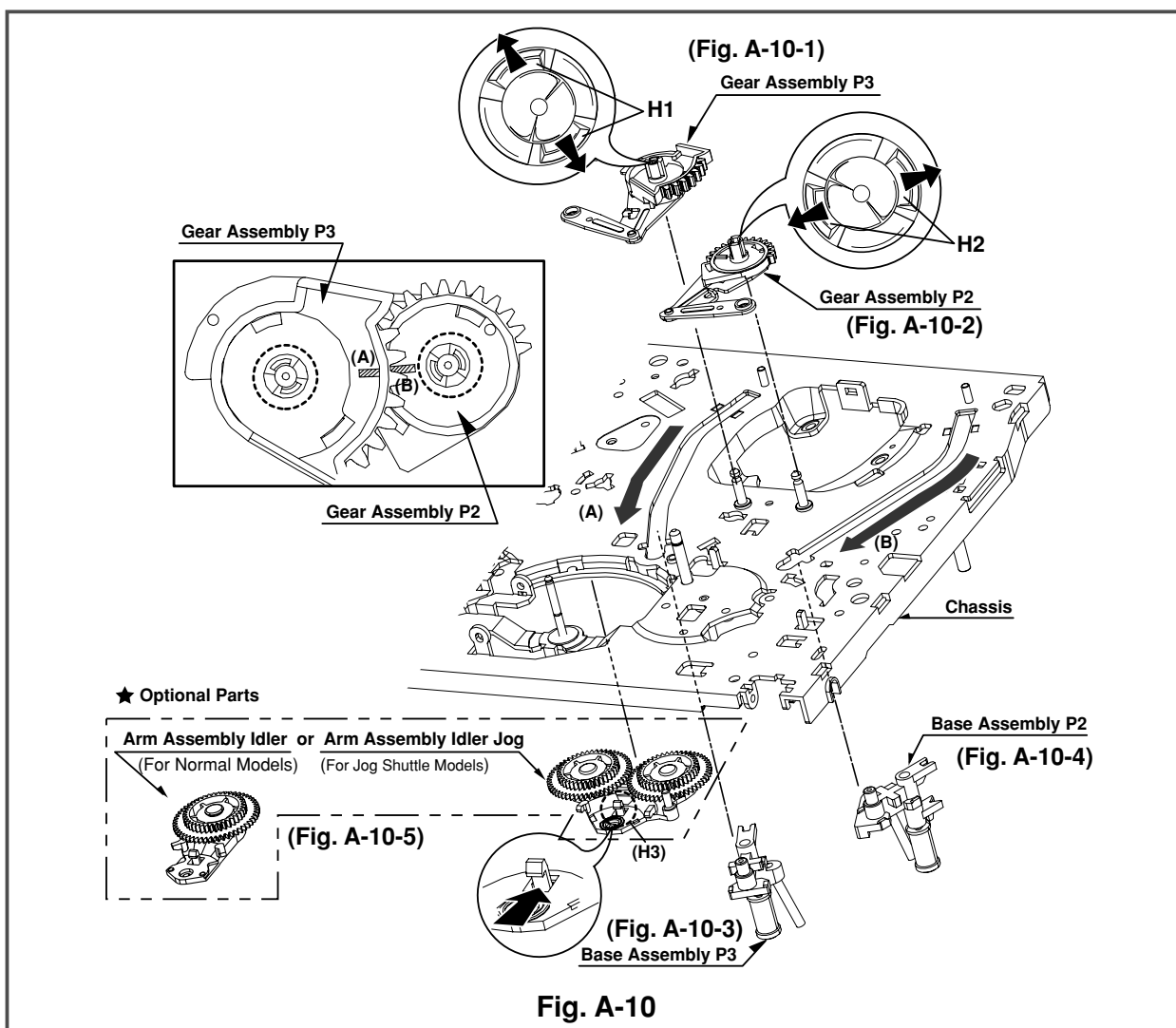
Lever Tension (Fig. A-9-4)

- 1) Remove the Screw(S4) and lift up the Base Tension.
- 2) Lift up the Plate Slider.
- 3) Hold the (A) Part of the Lever Tension and turn to the counterclockwise direction, and then lift up the Lever Tension.

NOTE

- (1) When reassembling, turn the Lever Tension to the clockwise direction in maximum.
- (2) Push the plate slide right side to be guided by the shaft.

DECK MECHANISM DISASSEMBLY



31. Gear Assembly P3 (Fig. A-10-1)/ Gear Assembly P2 (Fig. A-10-2)

- 1) Unhook the two Hooks(H1) and lift up the Gear Assembly P3.
- 2) Unhook the two Hooks(H2) and lift up the Gear Assembly P2.

32. Base Assembly P3 (Fig. A-10-3)/ Base Assembly P2 (Fig. A-10-4)

- 1) Move the Base Assembly P3 in the direction of the arrow of the Chassis Hole(A) and push down the Base Assembly P3.
- 2) Move the Base Assembly P2 in the direction of the arrow of the Chassis Hole(B) and push down the Base Assembly P2.

33. Arm Assembly Idler or Arm Assembly Idler Jog(Fig. A-10-5)

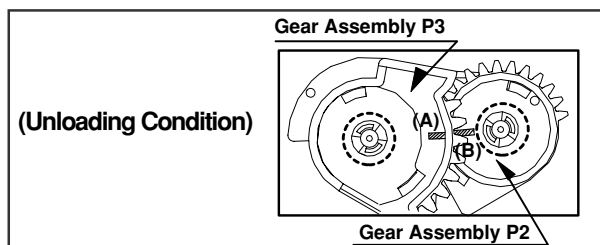
- 1) Unhook the Hook(H3) and push down the Arm Assembly Idler Jog.

NOTE

- 1) Arm Assembly Idler is for Normal Models.
- 2) Arm Assembly Idler Jog is for Jog Shuttle Models.

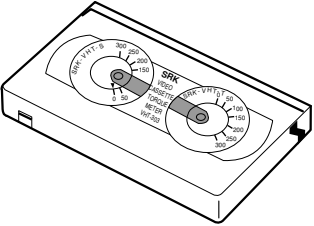
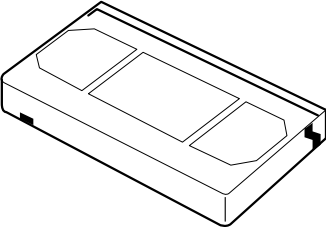
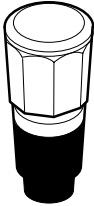

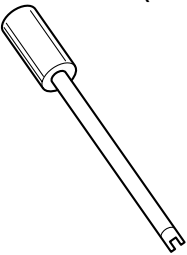
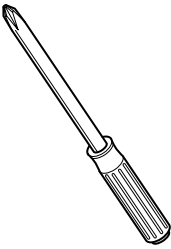
NOTE

- 1) When reassembling, confirm that the (A) Part of the Gear Assembly P3 is aligned to the (B) Part of the Gear Assembly P2 as shown below.



DECK MECHANISM DISASSEMBLY

• Tools and Fixfures for Service

1. Cassette Torque meter SRK-VHT-303(Not SVC part) 	2. Alignment tape (See figure below) 	3. Torque gauge 600g.Cm ATG 
4. Torque gauge adaptor 	5. Post height adjusting driver Parts No: SV-TGO-030-000 (SMALL) SV-TGO-020-000 (LARGE) 	6. + Type driver (Ø 5) 

ALIGNMENT TAPES FOR ADJUSTMENT

Derivation No.		A	B	C	D
Mechanism Adjustment Items		PAL	PAL	NTSC	NTSC
		SP/LP 2/4 Head	SP 2 Head	SP/LP/EP 2/4 Head	SP 2 Head
FM Envelope		TTV-P2L	TTV-P2	TTV-N1 (TTN-N12)	TTV-N2
A/C Head	Slantness	A commercially available tape			
	Height	TTV-P1 (TTV-P1L)	TTV-P1	TTV-N1 (TTV-N12) (TTV-N1E)	TTV-N1 (TTV-N12)
	Azimuth	TTV-P2	TTV-P2	TTV-N2	TTV-N2
X-value		TTV-P2 (TTV-P2L)	TTV-P2	TTV-N2 TTV-N2E TTV-N12	TTV-N2
RG Post Inclination		A commercially available tape			
Tape Back Tension		SRK-VHT-303			

The numbers in () parenthesis can be used as the substitute.

DECK MECHANISM ADJUSTMENT

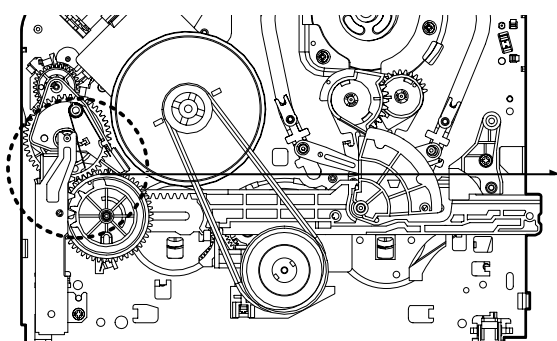
1.Mechanism Alignment Position Check

Purpose:To determine if the Mechanism is in the correct position, when a Tape is ejected.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Check Point
• Blank tape	• Eject Mode (with Cassette ejected)	• Mechanism and Mode Switch Position

- 1) Turn the Power S/W on and eject the Cassette by pressing the Eject Button.
- 2) Remove the Top Cover and Plate Assembly Top, visually check if the Gear Cam Hole is aligned with the Chassis Hole as below Fig. C-2.
- 3) IF not, rotate the Shaft of the Loading Motor to either Clockwise or Counterclockwise until the Alignment is as below Fig. C-2.
- 4) Remove the Screw which fixes the Deck Mechanism and Main Frame and confirm if the Gear Cam is aligned with the Gear Drive as below Fig. C-1(A).
- 5) Confirm if the Mode S/W on the Main P.C.Board is aligned as below Fig. C-1(B).
- 6) Remount the Deck Mechanism on the Main P.C.Board and check each operation.

CHECK DIAGRAM



BOTTOM VIEW

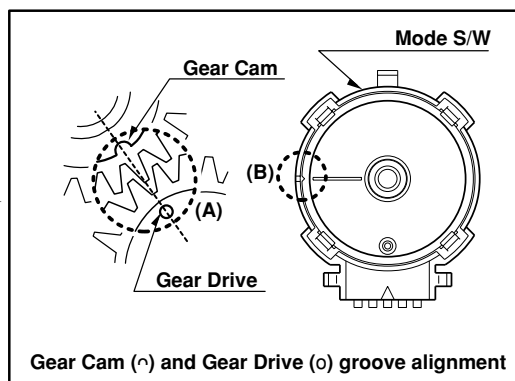
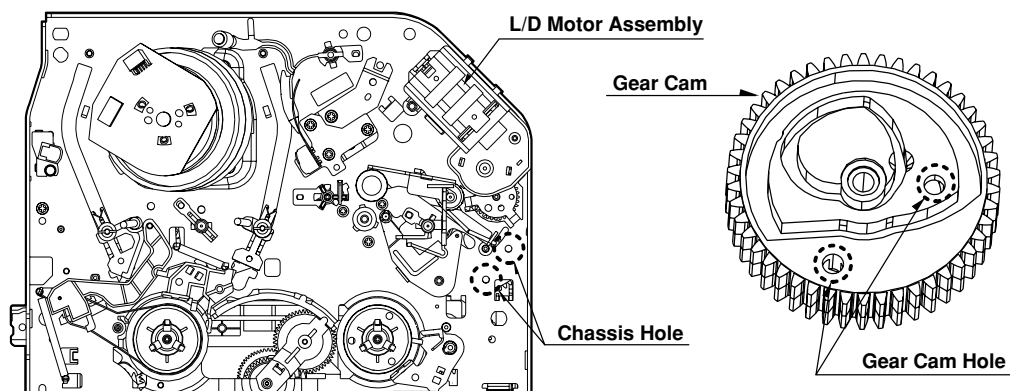


Fig. C-1



TOP VIEW

Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Preparation for Adjustment (To set the Deck Mechanism to the Loading state without inserting a Cassette Tape).

- 1) Unplug the Power Cord from the AC Outlet.
- 2) Disassemble the Top Cover and Plate Assembly Top.
- 3) Plug the Power Cord into the AC Outlet.
- 4) Turn the Power S/W on and push the Lever Stopper (L),(R) of the Holder Assembly CST to the back for

Loading the Cassette without Tape.

Cover the Holes of the End Sensors at the both sides of the Bracket Side(L) and Bracket Assembly Door to prevent a light leak.

Then The Deck Mechanism drives to the Stop Mode.

In this case, The Deck Mechanism can accept inputs of each mode, however the Rewind and Review Operation can not be performed for more than a few seconds because the Take-up Reel Table is in the Stop State and can not be detected the Reel Pulses.

3. Checking Torque

Purpose: To insure smooth Transport of the Tape during each Mode of Operation.

If the Tape Transport is abnormal, then check the Torque as indicated by the chart below.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Checking Method		
<ul style="list-style-type: none">• Torque Gauge(600g/cm ATG)• Torque Gauge Adaptor• Cassette Torque Meter SRK-VHT-303	<ul style="list-style-type: none">• Play (FF) or Review (REW) Mode	<ul style="list-style-type: none">• Perform each Deck Mechanism Mode without inserting a Cassette Tape(Refer to above No.2 Preparation for Adjustment).• Read the Measurement of the Take-up or Supply Reels on the Cassette Torque Meter(Fig. C-3-2).• Attach the Torque Gauge Adaptor to the Torque Gauge and then read the Value of it(Fig. C-3-1).		
Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 400g/cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 400g/cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	70~120g/cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	130~210g/m

NOTE:

The Values are measured by using a Torque Gauge and Torque Gauge Adaptor with the Torque Gauge affixed.

- Cassette Torque Meter (SRK-VHT-303)

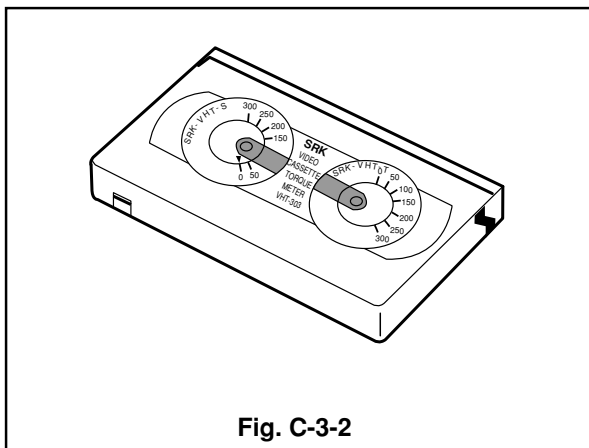


Fig. C-3-2

NOTE:

The Torque reading to measure occurs when the Tape abruptly changes direction from Fast Forward of Rewind Mode, when quick bracking is applied to both Reels.

- Torque Gauge (600g.cm ATG)

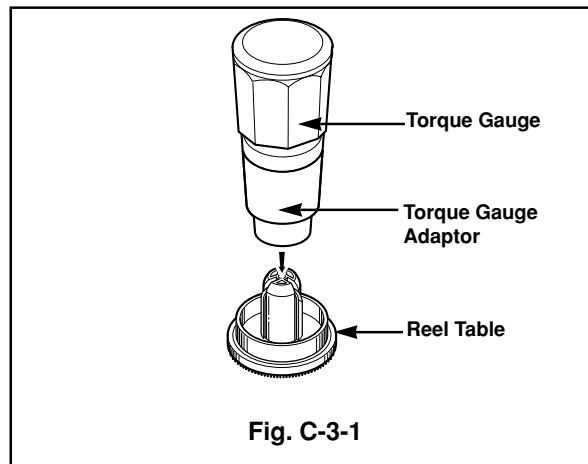


Fig. C-3-1

DECK MECHANISM ADJUSTMENT

4. Guide Roller Height Adjustment

Purpose: To regulate the Height of the Tape so that the Bottom of the Tape runs along the Tape Guide Line on the Lower Drum.

4-1. Preliminary Adjustment

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Post Height Adjusting Driver	• Play or Review Mode	• Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure <ol style="list-style-type: none"> 1) Confirm if the Tape runs along the Tape Guide Line of the Lower Drum. 2) If the Tape runs the Bottom of the Guide Line, turn the Guide Roller Height Adjustment Screw to Clockwise direction. 3) If it runs the Top, turn to Counterclockwise direction. 4) Adjust the Height of the Guide Roller to be guided to the Guide Line of the Lower Drum from the Starting and 	ADJUSTMENT DIAGRAM <p>Fig. C-4-1</p>
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4-2. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
• Oscilloscope • Alignment Tape • Post Height Adjusting Driver	• CH-1:PB RF Envelope • CH-2:NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Point • RF Envelope Output Point	• Play an Alignment Tape	• Guide Roller Height Adjustment Screws

Adjustment Procedure <ol style="list-style-type: none"> 1) Play an Alignment Tape after connecting the Probe of the Oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point. 2) Tracking Control(in PB Mode) : Center Position(When this Adjustment is performed after the Drum Assembly has been replaced, set the Tracking Control so that the RF Output is Maximum). 3) Height Adjustment Screw : Flatten the RF Waveform. (Fig. C-4-2) 4) Turn(Move) the Tracking Control(in PB Mode) Clockwise and Counterclockwise.(Fig. C-4-3) 5) Check that any Drop of RF Output is uniform at the Start and End of the Waveform. 	Waveform Diagrams <p>Fig. C-4-2</p> <p>Fig. C-4-3</p>
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NOTE If the adjustment is excessive or insufficient the tape will jam or fold.	Connection Diagram
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DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose: To insure that the Tape passes accurately over the Audio and Control Tracks in exact Alignment in both the Record and Playback Modes.

5-1. Preliminary Adjustment (Height and Tilt Adjustment)

Perform the Preliminary Adjustment, when there is no Audio Output Signal with the Alignment Tape.

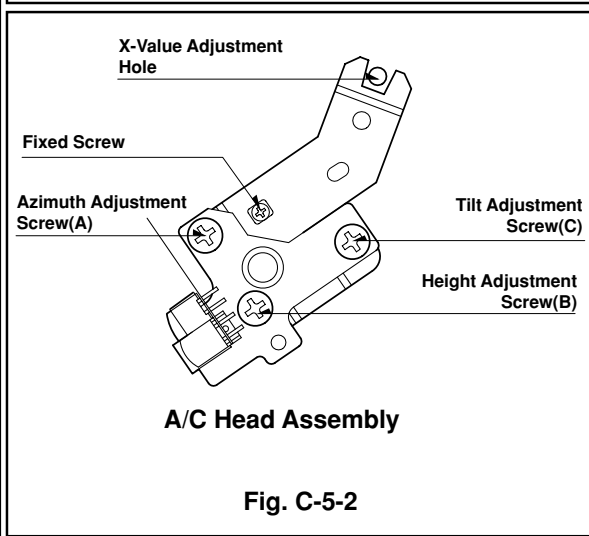
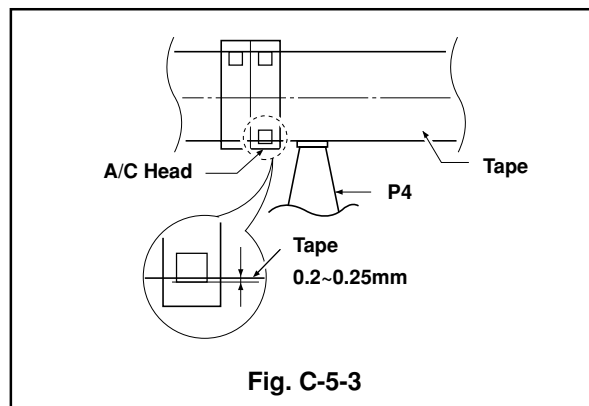
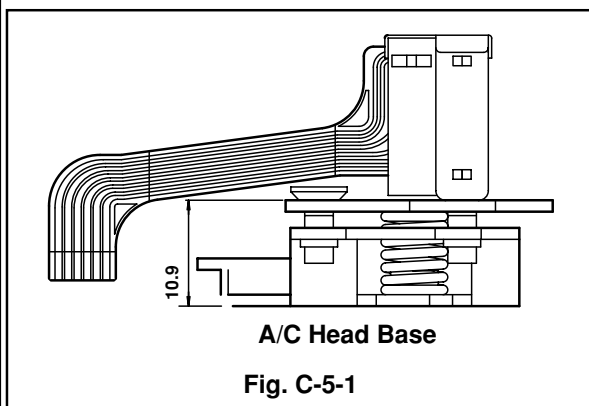
Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none"> Blank Tape Screw Driver(+) Type 5mm 	<ul style="list-style-type: none"> Play the blank tape 	<ul style="list-style-type: none"> Tilt Adjustment Screw(C) Height Adjustment Screw(B) Azimuth Adjustment Screw(A)

Adjustment Procedure/Diagrams

- Initially adjust the Base Assembly A/C Head as shown Fig. C-5-1 by using the Height Adjustment Screw(B).
- Play a Blank Tape and observe if the Tape passes accurately over the A/C Head without Tape Curling or Folding.
- If Folding or Curling is occurred then adjust the Tilt Adjustment Screw(C) while the Tape is running to resemble Fig. C-5-3.
- Reconfirm the Tape Path after Playback about 4~5 seconds.

NOTE

Ideal A/C head height occurs, when the tape runs between 0.2~0.25mm above the bottom edge of the A/C head core.



DECK MECHANISM ADJUSTMENT

5-2. Confirm that the Tape passes smoothly between the Take-up Guide and Pinch Roller(using a Mirror or the naked eye).

- 1) After completing Step 5-1.(Preliminary Adjustment), check that the Tape passes around the Take-up Guide and Pinch Roller without Folding or Curling at the Top or Bottom.
 - (1) If Folding or Curling is observed at the Bottom of the Take-up Guide then slowly turn the Tilt Adjustment Screw(C) in the Clockwise direction.
 - (2) If Folding or Curling is observed at the Top of it

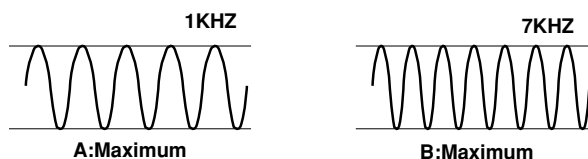
then slowly turn the Tilt Adjustment Screw(C) in the Counterclockwise direction.

NOTE:

Check the RF Envelope after adjusting the A/C Head, if the RF Waveform differs from Fig. C-5-4, performs Precise Adjustment to flat the RF Waveform.

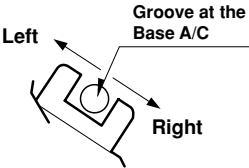
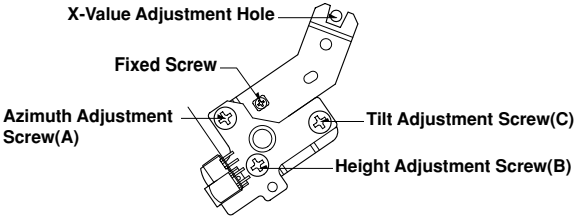
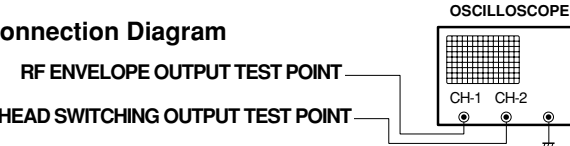
5-3. Precise Adjustment (Azimuth adjustment)

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none"> Oscilloscope Alignment Tape(SP) Screw Driver(+) Type 5mm 	<ul style="list-style-type: none"> Audio output jack 	<ul style="list-style-type: none"> Play an Alignment Tape 1KHz, 7KHz Sections 	<ul style="list-style-type: none"> Azimuth Adjustment Screw(A) Height Adjustment Screw(B)
Adjustment Procedure <ol style="list-style-type: none"> 1) Connect the Probe of the Oscilloscope to Audio Output Jack. 2) Alternately adjust the Azimuth Adjustment Screw(A) and the Tilt Adjustment Screw(C) for Maximum Output of the 1Khz and 7Khz segments, while maintaining the flattest Envelope differential between the two Frequencies. 			



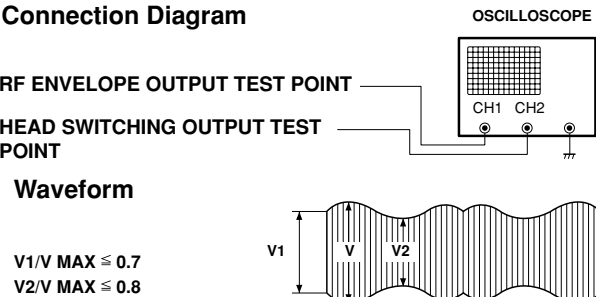
6. X-Value Adjustment

Purpose: To obtain compatibility with other VCR(VCP) Models.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
<ul style="list-style-type: none">• Oscilloscope• Alignment tape(SP only)• Screw Driver(+) Type 5mm	<ul style="list-style-type: none">• CH-1: PB RF Envelope• CH-2: NTSC: SW 30Hz PAL: SW 25Hz• Head Switching Output Test Point• RF Envelope Output Test Point	<ul style="list-style-type: none">• Play an Alignment Tape	
Adjustment Procedure 1) Release the Automatic Tracking to run long enough for Tracking to complete it's Cycle. 2) Loosen the Fixed Mounting Screw and move the Base Assembly A/C Head in the direction as shown in the Diagram to find the center of the peak that allows for the maximum Waveform Envelope. This method should allow the 31um Head to be centrally located over the 58um Tape Track. 3) Tighten the Base Assembly A/C Head mounting Screw.		Adjustment Diagram 	
		Connection Diagram 	

DECK MECHANISM ADJUSTMENT

7. Adjustment after Replacing Drum Assembly (Video Heads)

Purpose: To correct for shift in the Roller Guide and X value after replacing the Drum.			
Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Points
<ul style="list-style-type: none"> Oscilloscope Alignment tapes Blank Tape Post Height Adjusting Driver Screw Driver(+) Type 5mm 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: NTSC: SW 30Hz PAL: SW 25Hz Head Switching Output Test Point RF Envelope Output Test Point 	<ul style="list-style-type: none"> Play the blank tape Play an alignment tape 	<ul style="list-style-type: none"> Guide Roller Precise Adjustment Switching Point Tracking Preset X-Value
Checking/Adjustment Procedure Play a blank tape and check for tape curling or creasing around the roller guide. If there is a problem then follow the procedure 4. "Guide Roller Height" and 5. "Audio Control(A/C) Head Adjustment".		Connection Diagram  <p>Waveform</p> <p> $V1/V \text{ MAX} \leq 0.7$ $V2/V \text{ MAX} \leq 0.8$ RF ENVELOPE OUTPUT </p> <p style="text-align: right;">Fig. C-7</p>	

8. Check the Tape Travel after Reassembling Deck Assembly.

8-1.Check Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment/ Fixture	Specification	Connection Points	Test Conditions (Mechanism Condition)
<ul style="list-style-type: none"> Oscilloscope Alignment tapes(with 6H 3kHz Color Bar Signal) Stop Watch 	<ul style="list-style-type: none"> RF Locking Time: Less than 5 sec. Audio Locking Time:Less than 10sec 	<ul style="list-style-type: none"> CH-1: PB RF Envelope CH-2: Audio Output RF Envelope Output Point Audio Output Jack 	<ul style="list-style-type: none"> Play an alignment tape (with 6H 3kHz Color Bar Signal)
Checking Procedure Play an alignment tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.		NOTES: <ol style="list-style-type: none"> 1) CUE is fast forward mode (FF) 2) REV is the rewind mode (REW) 3) Referenced to the Play mode 	

8-2.Check for tape curling or jamming

Test Equipment/ Fixture	Specification	Test Conditions (Mechanism Condition)
<ul style="list-style-type: none"> T-160 Tape T-120 Tape 	<ul style="list-style-type: none"> Be sure there is no tape jamming or curling at the beginning, middle or end of the tape. 	<ul style="list-style-type: none"> Run the CUE, REV play mode at the beginning and the end of the tape.
Checking Procedure <ol style="list-style-type: none"> 1) Confirm that the tape runs smoothly around the roller guides, drum and A/C head assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the beginning, middle and end sections of the cassette. 2) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance. 		

MAINTENANCE/INSPECTION PROCEDURE

1 Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.

Check with the customer to find out how often the unit is used, and then determine that the unit is ready for inspection and maintenance. Check the following parts.

Phenomenon	Inspection	Replacement	
Color beats	Dirt on full-erase head	o	F/E Head
Poor S/N, no color	Dirt on video head	o	Video Head
Vertical or Horizontal jitter	Dirt on video head Dirt on tape transport system	o	
Low volume, Sound distorted	Dirt on Audio/control head	o	A/C Head
Tape does not run. Tape is slack	Dirt on pinch roller	o	Pinch Roller
			Belt Capstan
In Review and Unloading (off mode), the Tape is rolled up loosely.	Clutch Assembly D33K Torque reduced	o	Clutch Assembly D33K
	Cleaning Drum and transport system	Fig. C-9-3	

NOTE

If locations marked with o do not operate normally after cleaning, check for wear and replace.

See the EXPLODED VIEWS at the end of this manual as well as the above illustrations See the Greasing (Page 103) for the sections to be lubricated and greased.

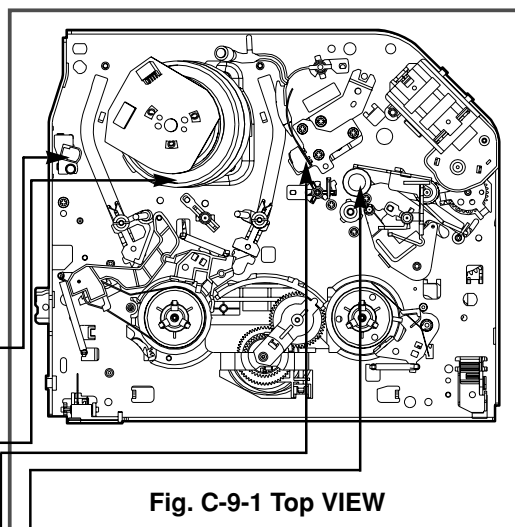


Fig. C-9-1 Top VIEW

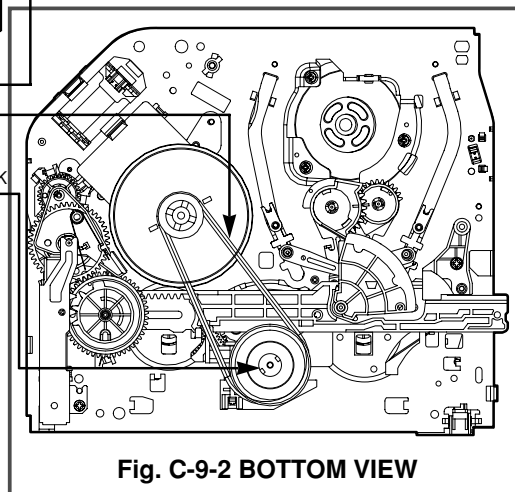


Fig. C-9-2 BOTTOM VIEW

* No. (1)~(13) Indicates the Tape Path to be traveled from Supply Reel to Take-up Reel.

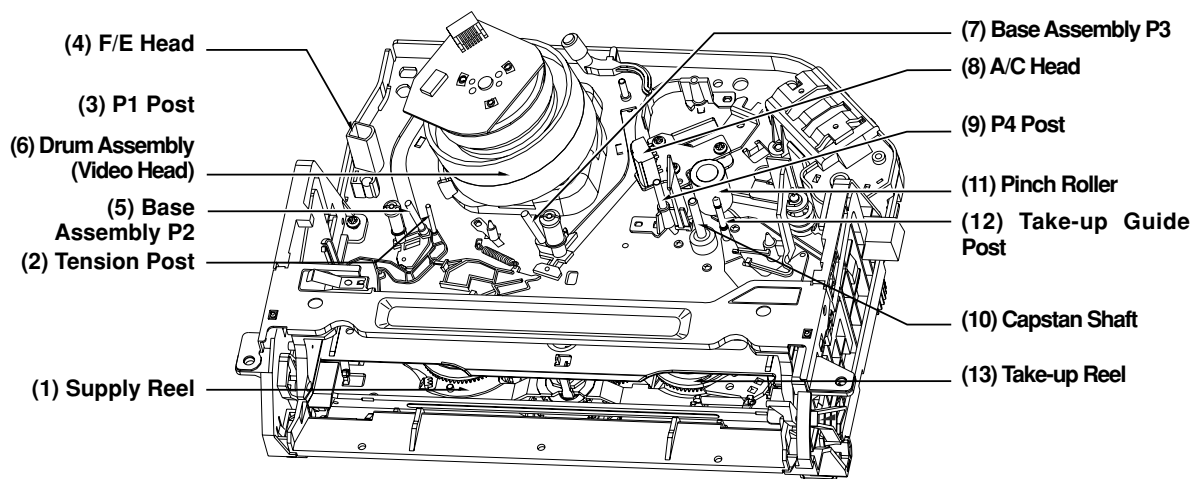


Fig. C-9-3 Tape Transport System

MAINTENANCE/INSPECTION PROCEDURE

2. Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatibility with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

3. Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.

But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1

When inspection is necessary Average hours used per day	About 1 year	About 18 months	About 3 years
One hour			
Two hours			
Three hours			

4. Supplies Required for Inspection and Maintenance

- (1) Grease : Kanto G-311G (Blue) or equivalent
- (2) Isopropyl Alcohol or equivalent
- (3) Cleaning Patches
- (4) Grease : Kanto G-381 (Yellow) : Used only for Reel S and Reel T

5) Maintenance Procedure

5-1) Cleaning

- (1) Cleaning video head
First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.

(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)

Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.

- (2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isopropyl Alcohol.

NOTES:

- ① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
- ② Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no that force is that would cause deforming or damage applied to the system.

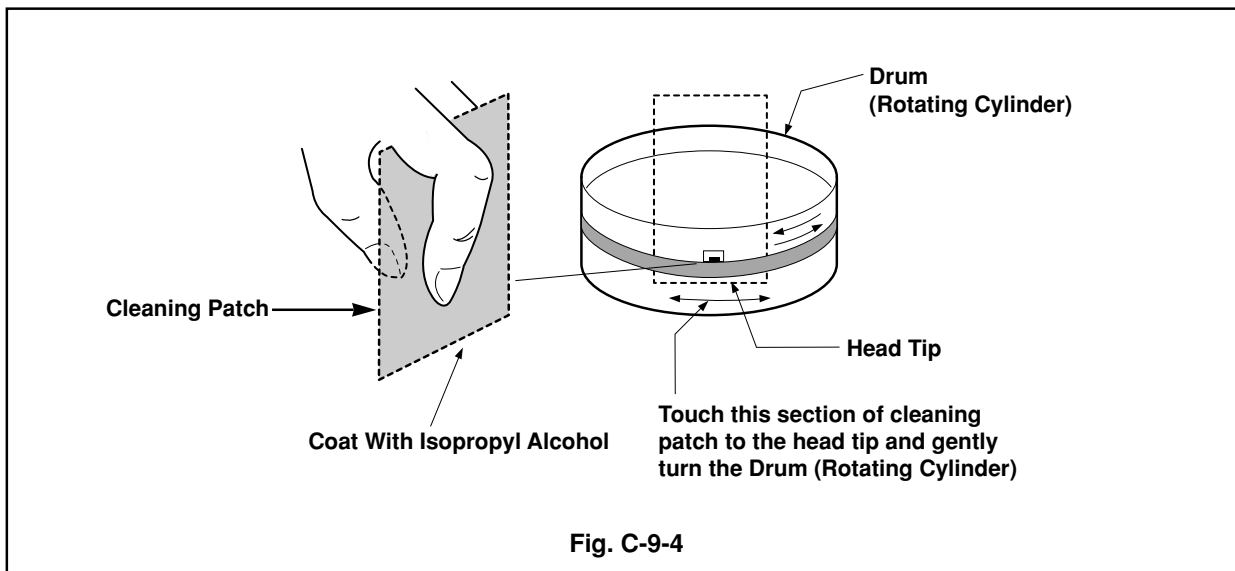


Fig. C-9-4

MAINTENANCE/INSPECTION PROCEDURE

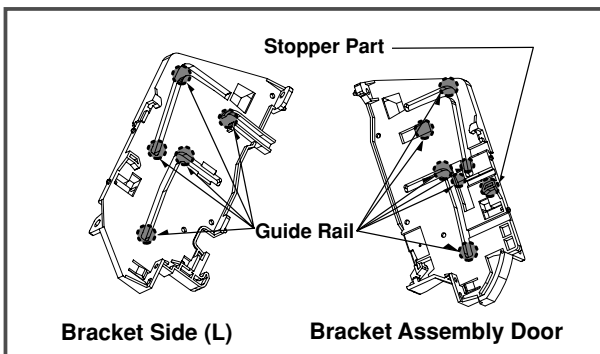
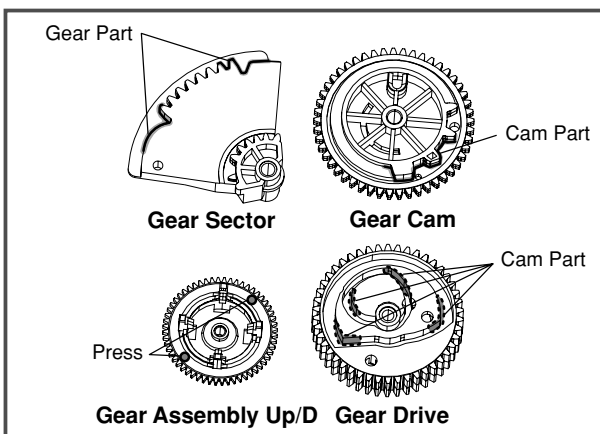
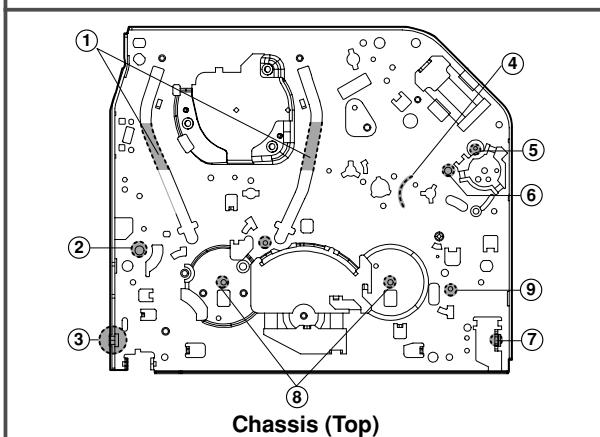
5-2) Greasing

(1) Greasing guidelines

Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with cleaning patch wetted in Isopropyl Alcohol.

NOTE:Greasing Points

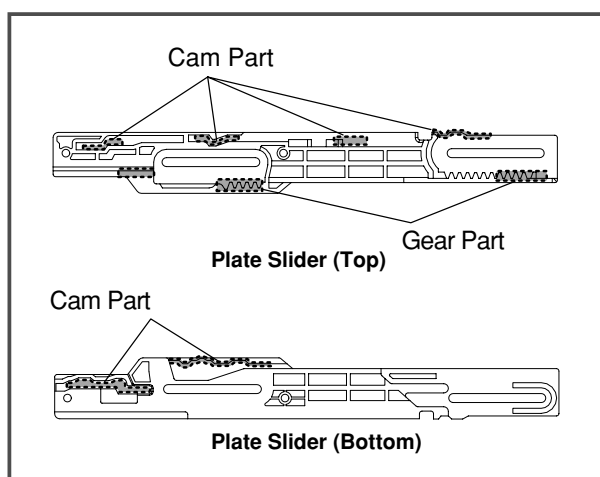
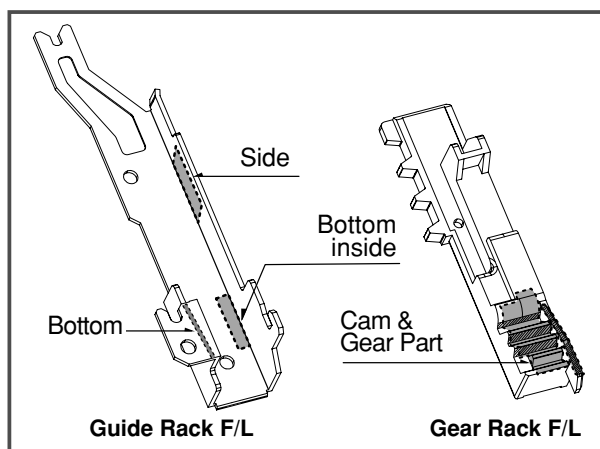
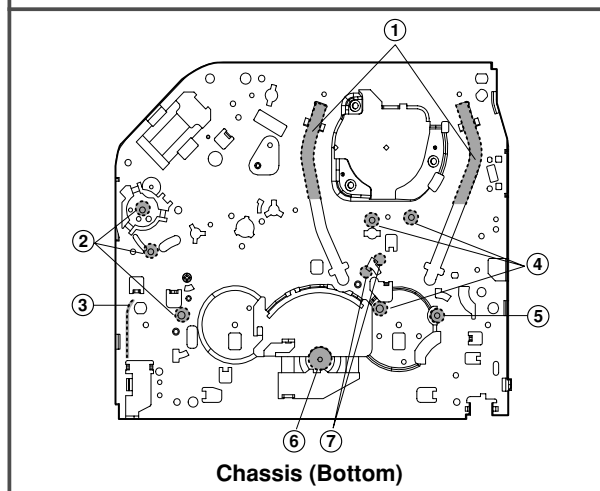
- | | |
|-----------------------------------|---|
| 1) Loading Path Inside & Top side | 6) Shaft |
| 2) Base Tension Boss inside Hole | 7) Arm Assembly F/L of Buming Inside Hole |
| 3) Arm Assembly F/L "U" Groove | 8) Reel S, T Shaft (G381:Yellow) |
| 4) Arm Take-up Rubbing Section | 9) Brake T Groove |
| 5) L/D Motor Worm Wheel Part | |



(2) Periodic greasing

Grease specified locations every 5,000 hours.

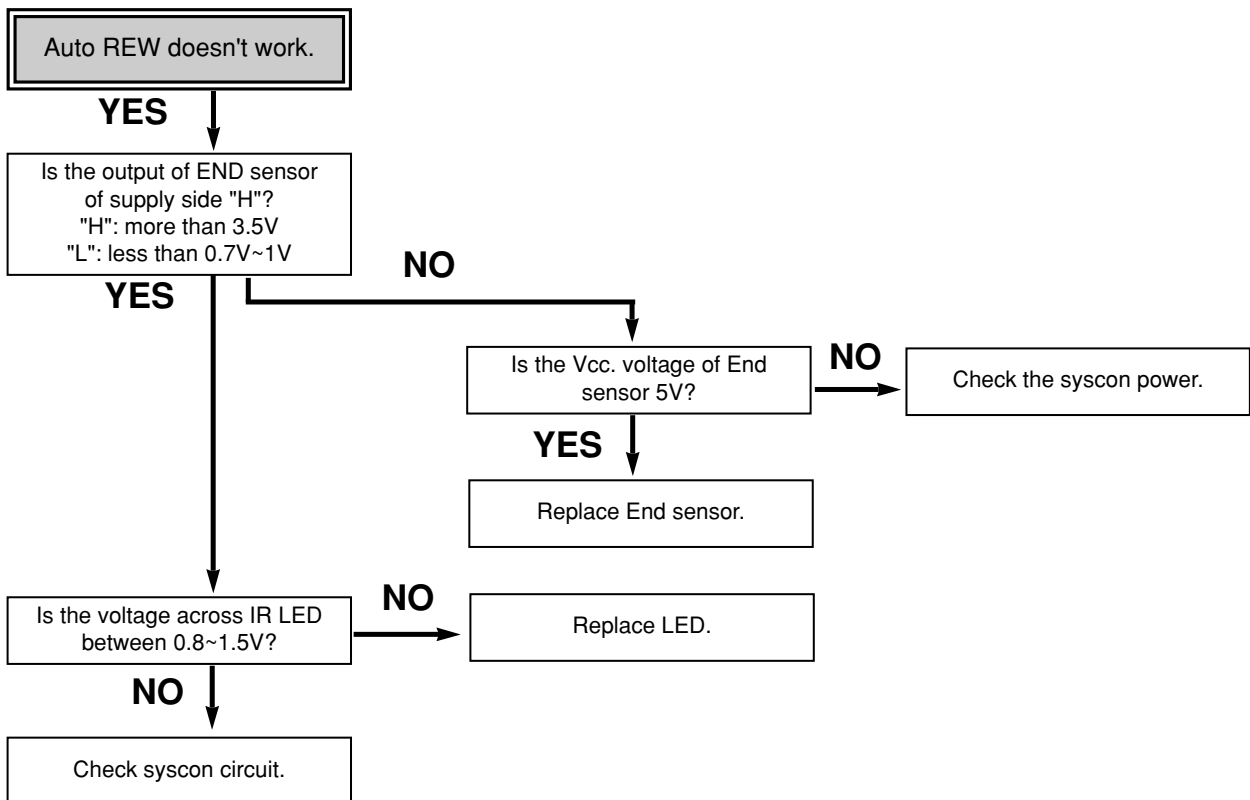
- | | |
|-----------------------------------|------------------------------|
| 1) Loading Path Inside & Top side | 5) Lever Tension Groove |
| 2) Shaft | 6) Clutch Assembly D33 Shaft |
| 3) Gear Rack F/L Moving Section | 7) Brake "S" Rubbing Section |
| 4) Shaft | |



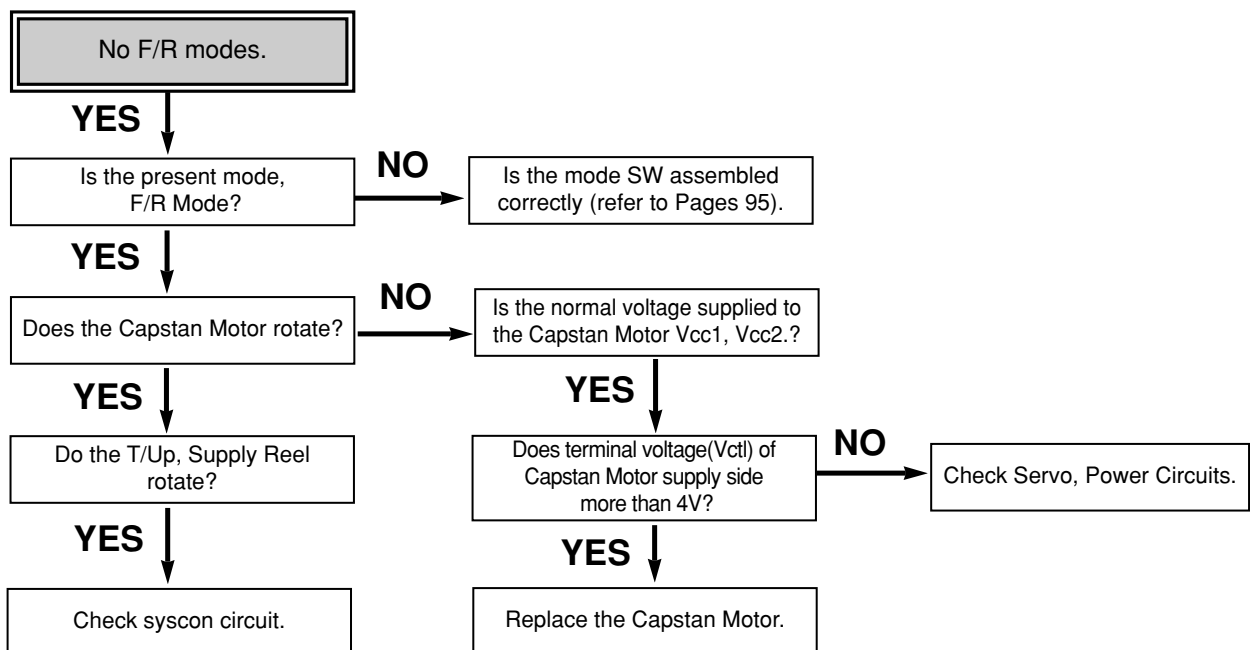
MECHANISM TROUBLESHOOTING GUIDE

1. Deck Mechanism

A.

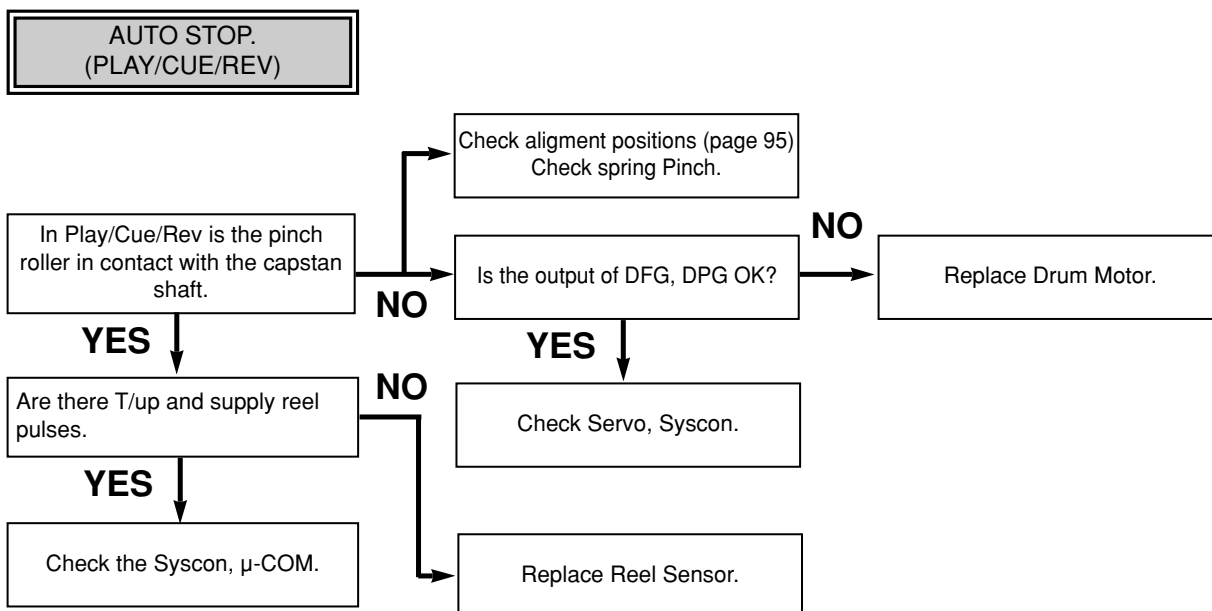


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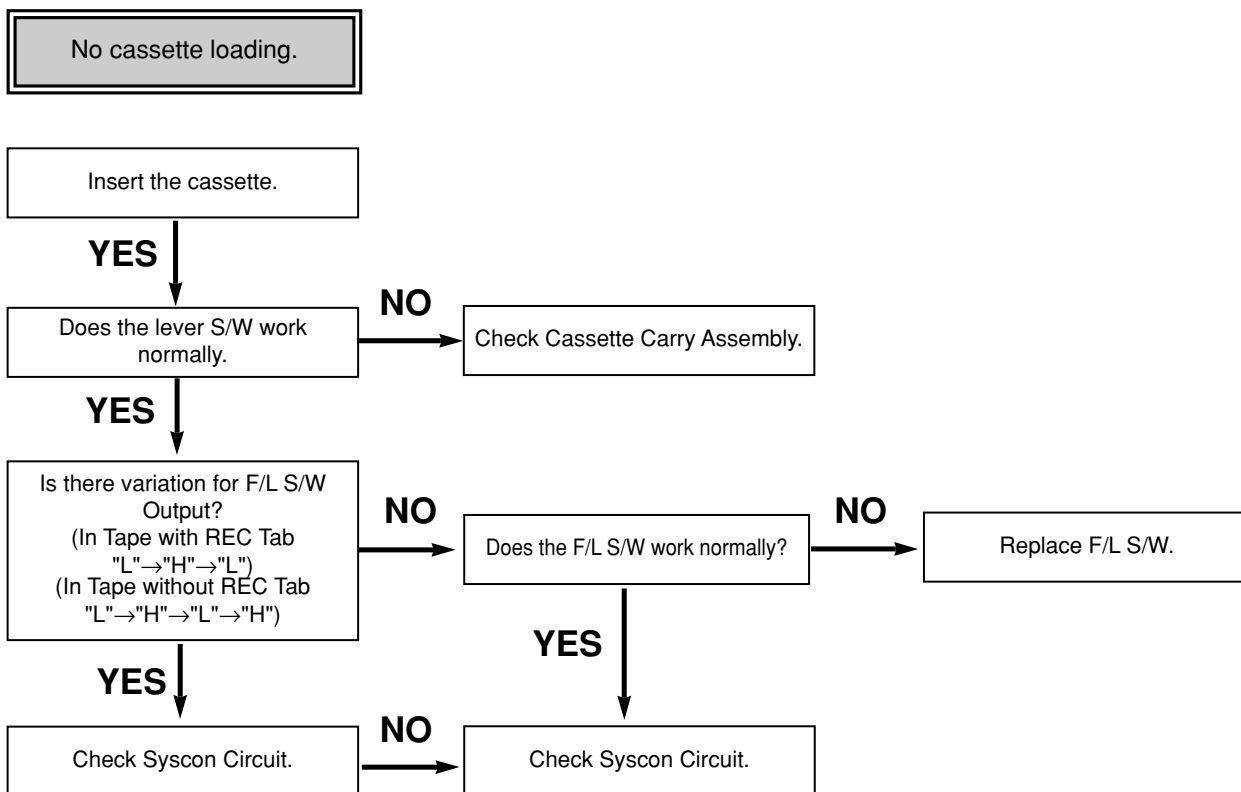


MECHANISM TROUBLESHOOTING GUIDE

C.

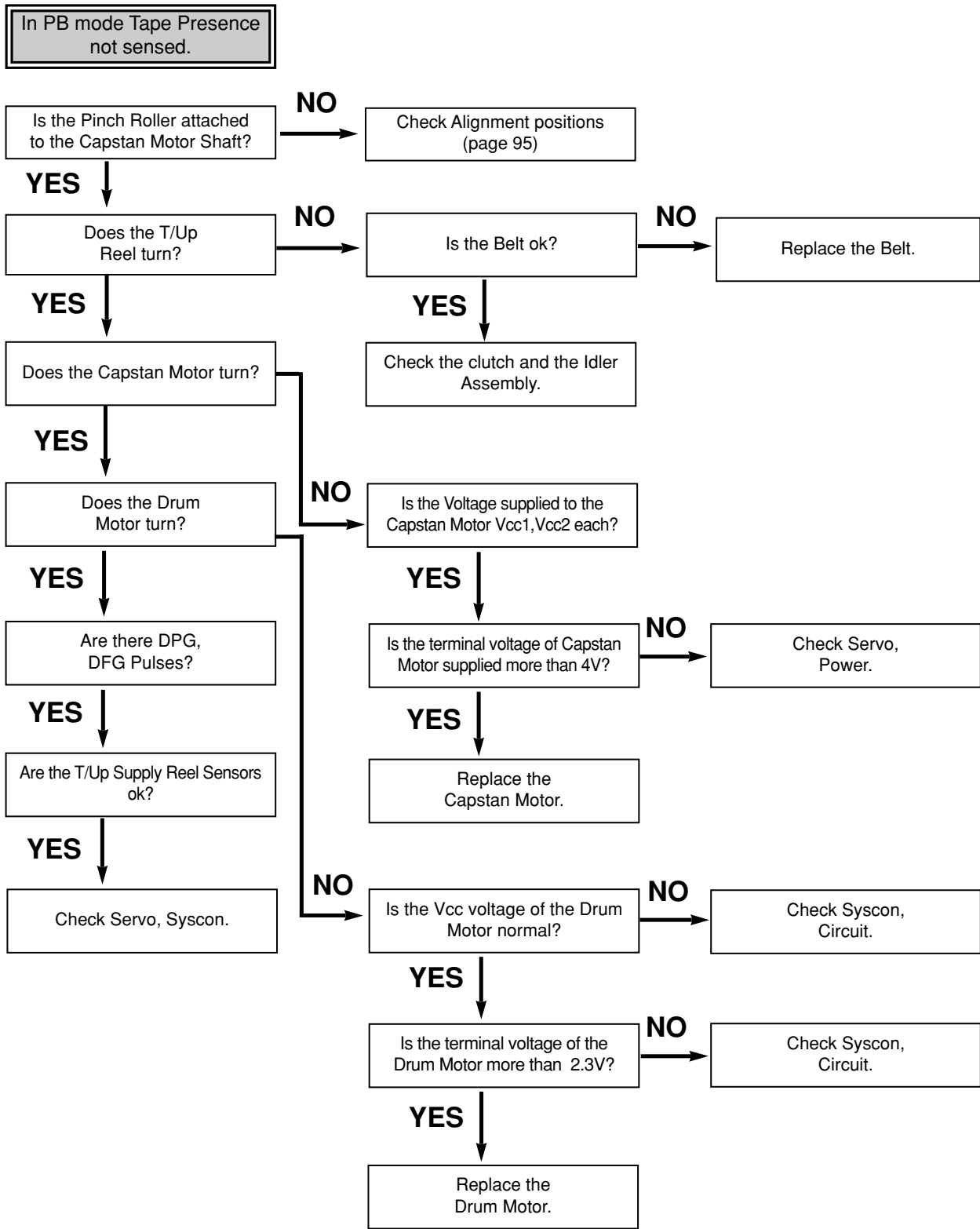


D.



MECHANISM TROUBLESHOOTING GUIDE

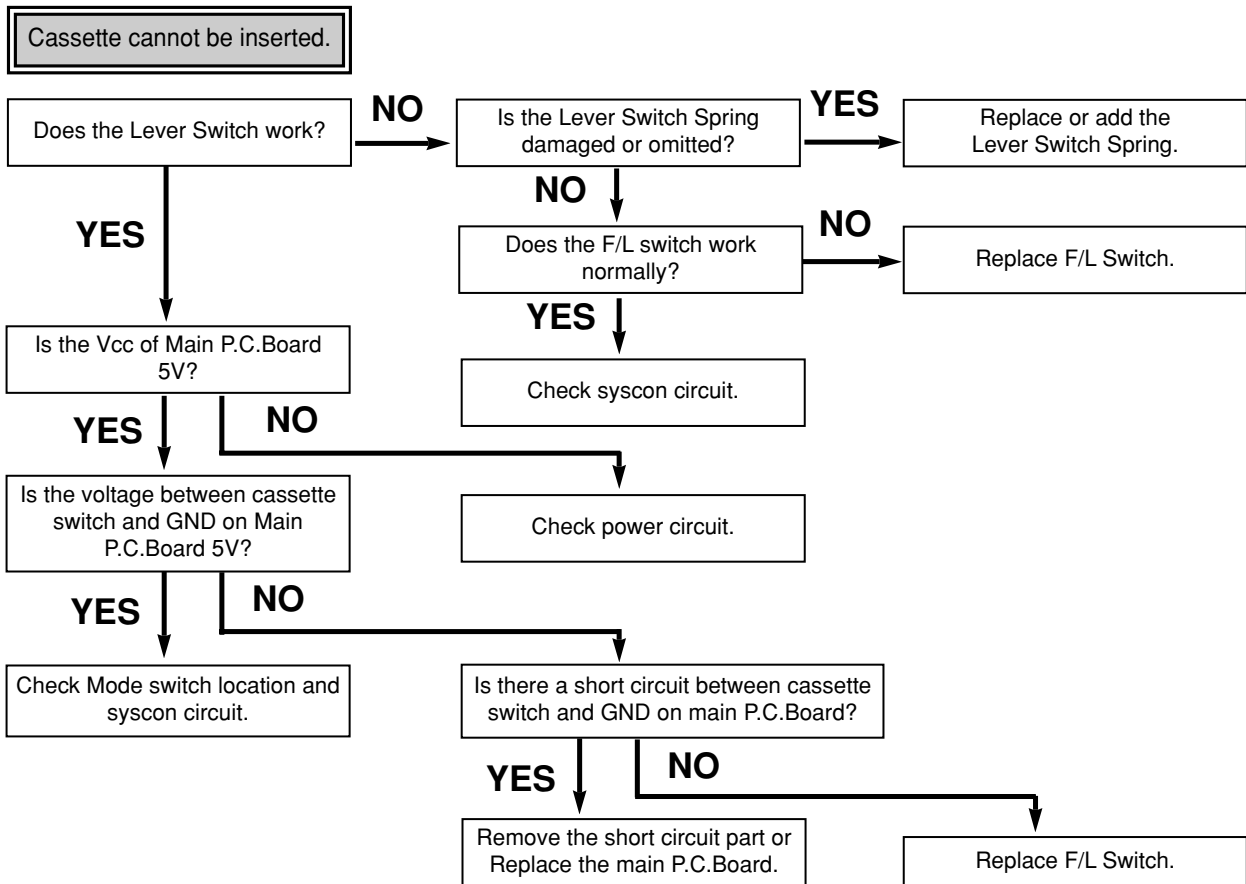
E.



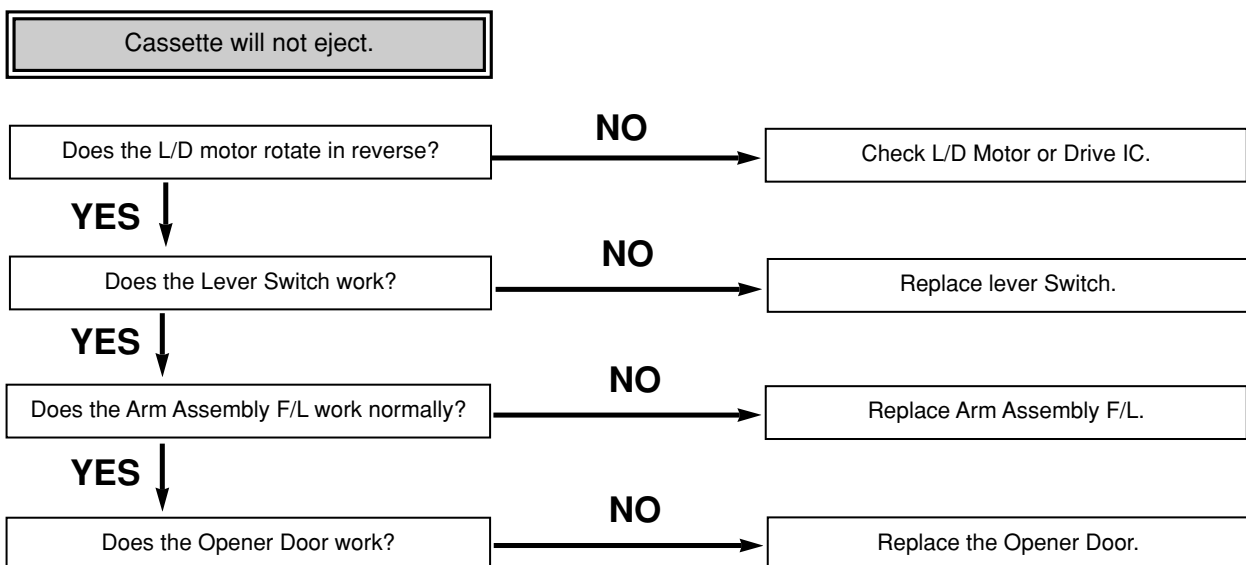
MECHANISM TROUBLESHOOTING GUIDE

2. Front Loading Mechanism

A.

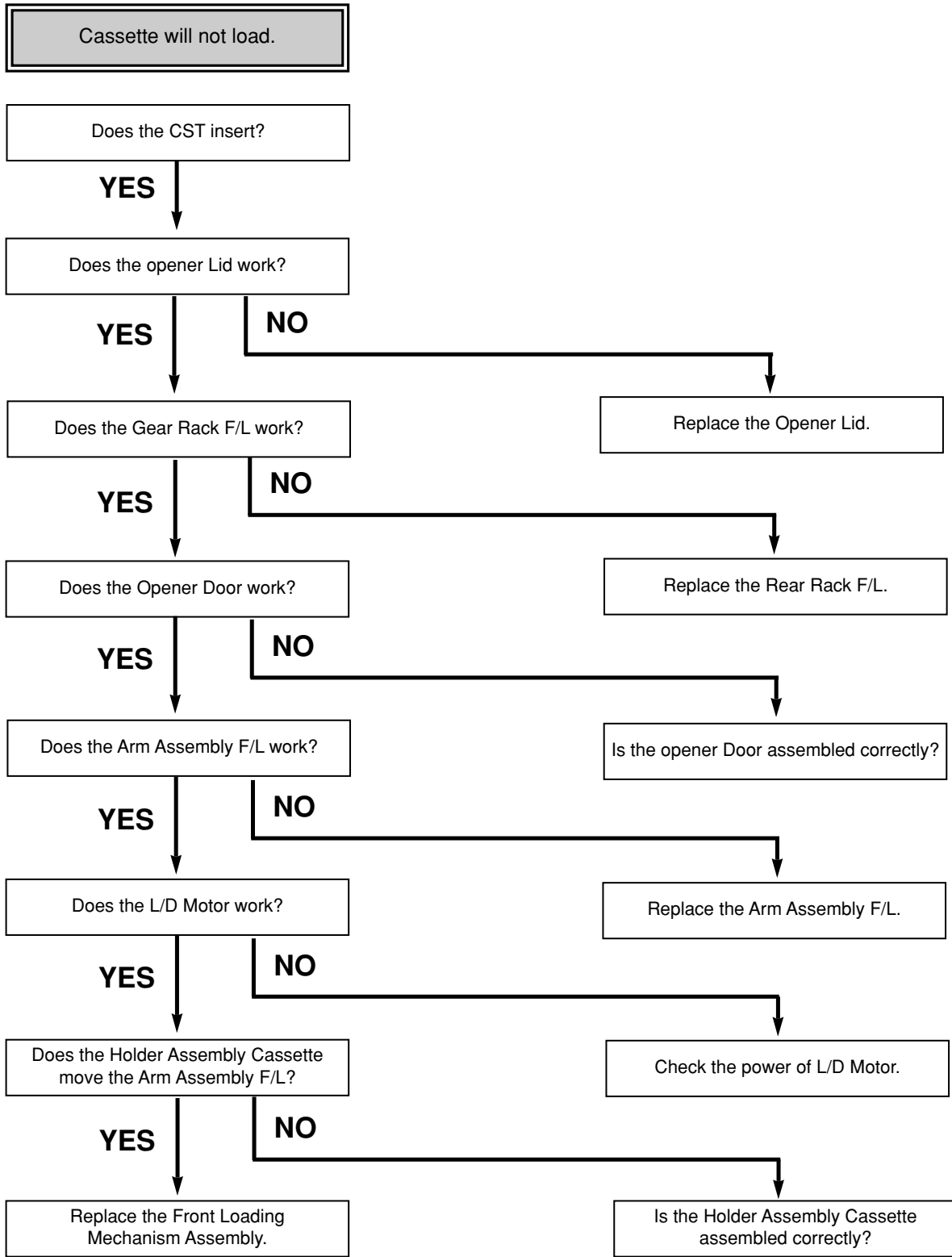


B.



MECHANISM TROUBLESHOOTING GUIDE

C.





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